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BRANCH I.

ORIGINAL COMMUNICATIONS.

FOR THE FARMER'S MAGAZINE.

Comparative View of Farmers fifty years ago, and at the preſent day, as alſo of the State of Society among them at theſe periods.

[INSCRIBED TO THE EARL OF HADDINGTON.]

THERE are not many popular clamours, either more ancient or more generally believed to be well-founded, than that againſt the oppreſſion of the nobility and gentry to their tenants. In former times, it was the occaſion of rebellions in England; and, in our own days, of heart-burnings and much diſcontent amongſt the lower orders of ſociety in every part of the iſland. I pretend not to examine what real cauſe was given for theſe: this might be a ſubject of political inquiry, not unworthy of a wiſer head and a better pen than I can boaſt of. All I aim at, is to beguile a few tedious hours in theſe long ſummer days, and to amuſe myſelf and ſome of your Scotiſh readers, by exhibiting a few of the practices, and ſomething of the ſtate of ſociety amongſt farmers fifty years ago, and comparing them with thoſe of the preſent day. I may perhaps not adhere ſtrictly to my propoſed plan; the connexion may not be cloſely ſtudied, for I ſhall follow wherever my pen may lead me. Compoſition I diſclaim all knowledge of, for, though an old man, I am but a young author. I offer not, however, any excuſe for this attempt, nor do I ſolicit any mercy or

indulgence. Search me well, decompound me, criticiſe me as ſeverely as you can, and, with all your might, '*try from the writings to find the writer out.*'

In the courſe of theſe little ſketches, the critical reader, no doubt, will diſcover ſuch ſtrong internal evidence of my being an Eaſt Lothian man, that it would be to no purpoſe to deny it. Indeed, I have ſometimes boaſted both of that, and of my connexion by blood and friendſhip with many reſpectable tenants in that county. I was educated there, and ſucked in, with my mother's milk, all the common-place outcries againſt landlords; and I carried abroad with me, early in life, the moſt ſettled perſuaſion of the horrors of the farmer's ſituation. This was kept alive by the letters of my friends, and blown up into a flame in 1771, after the eſtate of Dirleton had been divided, and let by the advice of Mr Fowlis. At my return, I renewed my acquaintance with Mr †*** in †*** †*****, whom I had known in Jamaica. It would have been difficult to meet with a fitter perſon to keep up, nay to ſtrengthen my old prejudices. He was continually ringing changes upon the miſerable condition of the farmer; how, placed between the two worſt ſets of men in the country, the lairds on the one hand, and the labourers on the other, it was impoſſible for him to exiſt. My friend is a man of great eloquence: he held it up in many new views, proved it in ſo many different ways, and was ſo much really in earneſt, that I was perfectly convinced the ſituation of the farmer was not by any means an enviable one. It was not before I had been well aſſured that, in his ſhort leaſe for nineteen years, he had added a conſiderable ſum to his fortune, and ſeen his farm let to a ſkilful and thriving tenant at an advanced rent of 500l., that I began to ſuſpect my belief might be ill-founded. I tried to recollect circumſtances, to combine, and to compare the appearance, the comforts, the enjoyments, the every thing of modern farmers, with thoſe of their predeceſſors; and I could no longer credit that men of liberal education, agreeable manners, greater capital and ſuperior ſkill, with improved machinery, and every thing about them wearing the face of plenty, were leſs at eaſe than their forefathers had been, in the lamented days of low rents, and tender indulgent landlords.

I learned to read of a reſpectable old woman in the village; and, at this moment, my ſoul throbs with ten thouſand tenderneſſes, and ſickens within me, when I recollect the innocent plays I and my little compeers ſported at upon the Smiddy Green, long ſince ſubmitted to the plough. My ſchool-fellows were the ſons and daughters of hynds and day-labourers, who were taught by our miſtreſs to anſwer the queſtions in the Mother's and Single Catechiſms,

Catechiſms, and to read the Bible, which finiſhed their education. Now-a-days, it is common for them to attend the pariſh ſchool-maſter, to learn of him to read, to write, and to caſt accounts; and a moderate portion of knowledge is very generally diffuſed among them. Whether this may contribute to the comfort of men doomed to labour for their daily bread, is a queſtion I ſhall not preſume to determine.

A more refined ſtate of ſociety has rejected thoſe athletic exerciſes, in which, in the beginning of my days, the young and healthy employed their leiſure hours. There is now no *ſweerneſs*, no *wreſtling bouts*, at which C****** R*** *in* D******** overcame all his competitors; none of thoſe *curling matches*, where pariſh contended againſt pariſh; no wheels are now hurled down the Skid Hill; *golf* even is ſickly; and, for many years, *bulleting* has not been heard of in the lower parts of the county. It was like ſtinging me with piſmires, to obſerve the puny efforts, in this ſcience, of our yeomanry, when lately in quarters at Dunbar; nor could I, without a ſigh, compare them with thoſe of J*** C********** in all his glory. David Mather was a rival of this mighty hero: they played ſingle-handed a match at Tranent in the year 1756. Mather candidly yielded after the firſt throw, and buried in two caniſters an account of the weight of the bullets, and the diſtance which his rival had flung them. The old miniſter took delight in pointing out to his friends the limits of his nephew's wonderful exertion.

If tradition ſhall not have preſerved ſome faint trace of this fact, at the time when future colliers ſhall chance to uncover theſe caniſters, poſterity will ſuſpect the poſſibility of a man having thrown a bullet ſo far; or they'll regard it as Penelope's ſuitors regarded the bow of Ulyſſes, which they were unable to bend; or, to take a ſimile nearer our own times, and nearer home, as we look with admiration, not unmixed with doubt, upon the ſword of King Robert Bruce, carefully preſerved at Dunfermline, which no degenerate modern is able to wield.

My relation, †**** †****** at †******, ſturdily oppoſed himſelf to the growing effeminacy and predilection for ſedentary amuſements. Many a ſerious conteſt had he with his ſervants, who was the beſt wreſtler, or who could carry the heavieſt load. It was ſurmiſed at the time, and the anecdote is yet freſh in the memory of many ploughmen in the neighbourhood, that a defeat, on the ſame day, by the ſame man, in each of theſe elegant accompliſhments, diſguſted him ſo much, as to occaſion his leaving the county. He now reſides in the neighbourhood of Edinburgh, where he is continually bewailing the effeminate degeneracy of modern times.

Sixty or ſeventy years ago, the young farmer's education was little ſuperior to what is at preſent beſtowed upon the ſons of the better ſort of ploughmen. But now, after a regular courſe of the claſſics, and being well grounded in the principles of grammar, he has his ſchool education finiſhed by a winter or two in Edinburgh. His appearance, and manner, and converſation, are thoſe of a man of the world, and ſuch as would not diſgrace any man's table. I have a real pleaſure in relating the very agreeable ſurpriſe expreſſed upon this ſubject by David Scott of Duninald Eſq., late chairman of the India Company. On a viſit to Scotland, after his return from India, he did me the honour to dine at my houſe, where the converſation naturally turned upon the general improvement of men and things during our abſence. Mr Dempſter, who was of the party, invited Mr Scott for the following Sunday, and engaged to have ſome of the moſt intelligent farmers to meet him to dinner. Mr Dempſter kept his word. Mr Scott was delighted with their converſation; and, at this day, takes much pleaſure in relating the anecdote to his friends. Commiſſioner Graham of the Exciſe, who was preſent, knows I ſpeak the truth.

It is pleaſing to reflect, that ſuperſtition, ſo prevalent in my younger days, is either totally extinguiſhed, or very nearly ſo. Idle ſtories of ghoſts, elves, and fairies *green and white*, are never heard of: there is hardly a *Willie Mouley* in the county; and the only remnant of ſuperſtition that is unqueſtionably vouched for, is in my worthy neighbour Mr †** at †*******, who would not think either his perſon or his property ſecure without the protection of a white cock.

While I rejoice at the decay of ſuperſtition, I wiſh I could add with truth, that piety or true religion is not likewiſe upon the decline. We certainly have not leſs honour and moral honeſty among us: thoſe complaints of ſhort meaſure, and mean pitiful tricks, that diſgraced our forefathers, are now unknown: yet I obſerve with pain, that *the grace after meat* has totally diſappeared, and *that* before meat has grown ſhorter; while family worſhip, the daily practice of better men, in better times, is ſo commonly laid aſide, that it is probably beyond the power of any perſon in the county, the beſt acquainted with the private economy of families, to name half a dozen which ſtill continue this very commendable practice.

My late friend, the facetious Sir Hew Dalrymple, uſed to ſay, in his merry mood, that he had watched its decay, and that, following the fate of the large black bonnet, it had fallen off, as that had diminiſhed in ſize, and changed colour from black to ſimple blue. The coincidence may be accidental; but certain it

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is, that the practice of family worſhip is moſt general amongſt thoſe farmers, who, as about Bathgate and in Carnwath Muir, ſtill perſevere in the uſe of the bonnet—of its primitive colour and magnitude.

To be ſure, grace before meat of ſuch length as I have ſometimes heard it, and as it generally was in the time of Eraſmus in the 16th century, when, after grace, ſome perſon who had a good voice read diſtinctly a chapter out of St Paul's Epiſtles, or out of Solomon's Proverbs;—this, I ſay, would be rather inconvenient, and ſubmitted to with great impatience, now-a-days when we are fond of warm victuals. But I moſt cordially join Mr Wilberforce, where, in his excellent *Practical View of Chriſtianity*, he regrets the decay of family worſhip; and think with him, that a conſiderate mind cannot have a more pleaſing image preſented to it, than that of a couple, happy in each other, and in the pledges of their mutual love, uniting with their more immediate dependants, in an act of grateful adoration to the Author of all their mercies.

Farmers in Eaſt Lothian are poſſeſſed of capital and ſkill beyond thoſe of tenants in moſt counties of either England or Scotland; and the ſteady application of theſe to the culture of a ſoil tolerably fertile (of which they are by their leaſes in the fulleſt poſſeſſion), and in a good climate, enables them to pay rents unheard of elſewhere, and even there till within theſe few years. I deſire to be rightly underſtood: I mean not to ſay, their ability to pay ſuch rents ariſes ſolely from ſuperior ſkill and capital; being ſenſible that the increaſed price of the grain they raiſe, the union of corn and graſs farming, the cultivation of turnips, and improvements upon every article of machinery they employ, muſt be allowed to come in for a conſiderable ſhare. Yet, when I think of the *great rents in kind*, paid in former times, I am almoſt diſpoſed to believe, that the heavy additional expence attending all his operations would be ſufficient to counterbalance the higher price, and whatever additional quantity of grain improvements in his art may enable the farmer to bring to market.

The eſtate of Dirleton paid formerly a very heavy rent in kind; and, during the late ſcarcity, I frequently heard Mr Niſbet ſay, that he was receiving leſs from his tenants than their predeceſſors paid an hundred years ago. Craigielaw was long rented at 28 chalders of barley: it now pays about 800 guineas, or 30l. per chalder, or 1l. 17s. 6d. per boll of barley of the old rent. The old farm of Weſt Barns conſiſted of 360 acres, and paid 36 chalders of victual, little more than ſix firlots per acre; wheat, barley, oats, and peas, in equal quantities. One third part of it was let within theſe three months at 5l. per acre,

which is the rent that the proprietors of all the good lands in the county now aim at, and very nearly 3l. 3s. per boll of the old rent. Long Niddry, inferior with regard to ſoil, but perhaps in a more deſireable ſituation, being within a dozen of miles of Edinburgh, pays 6 firlots of wheat, 6 firlots of barley, and 30s. of money rent per acre. The corn alone is more than double of what was formerly paid for Weſt Barns. Theſe facts I cannot get the better of; I find I am going beyond my depth, and acknowledge myſelf ſurrounded with a thouſand difficulties, bewildered and loſt. This mode of comparing the rents in kind paid long ago, with the modern money rents, preſents us with a new view of the ſubject, and, ſo far as I know, is altogether novel; but I am acquainted with ſo few books upon farming, that I may be far miſtaken.

Little capital was ſufficient to carry on the buſineſs of a farmer, when oats coſt 5s. or 6s. per boll, and wheat 12s. or 15s.; when a good milk cow might be bought for 3l., an able horſe for 7l. or 8l., and when 1000 merks was no deſpicable portion for his daughter. Recourſe may be had to the fiars of the county for the prices of grain at no diſtant period, and to them I refer your readers; but I take the liberty to ſtate ſome facts with regard to other matters, and the prices of cattle, that never were generally known, or are long ſince forgotten. I might carry you back to the days of *Regiam Majeſtatem*, when a ſheep coſt only three halfpence, and lead you, by an unbroken chain of evidence, to the prices of the preſent day; but this is no part of my plan, and I ſhall not now aſcend higher than the days of our fathers.

I diſcovered lately, among ſome old papers, a letter of 1727, from Mr M**** in L******* to his friend, chaplain to a regiment of Scotiſh Hollanders, then in garriſon at Menin in Flanders, thanking him very heartily for 14l. 13s. 4d. he had lent, to enable him to *ſtock ſome graſs parks* he had then taken, probably at Goſford. How little would ſuch a ſum avail now-a-days!

Old Robertſon of Cloglen, a reſpectable Engliſh drover, informs me, that in 1747, and for ſeveral years about that time, he bought the beſt ſix or ſeven years old runts at 50s.; nay, later than that, Patie Herkes and John Thomſon, then in the meridian of their career, bought Highland cows at Crieff fair at 10s. 6d. a piece, and grazed them in the Butterwell-park at Gilmerton till near Yule, when they were ſold at 20s. and 21s. to Niſbet, grandfather of your preſent thriving fleſhers of that name at Haddington. He knocked them down with a bullet, which he kept in his right hand, while he held their head ſteady with his left. Can any of your preſent graziers boaſt of as great a proportional profit, in the time even of the late high prices of cattle? By the by,

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and I aſſert it with confidence, not a ſhilling has ever been made by grazing in Eaſt Lothian; indeed it would be unfair to expect it, in a diſtrict where the attention of the huſbandman is uniformly directed to the raiſing of crops of grain. †**** †******'s fortune forms no exception: the money he received from a friend, and paltry fifty pounds a year, ſuppoſed ſaved from his farm of †****, improved at compound intereſt, would amount to a greater ſum than he died poſſeſſed of. †******* †*** once made great gain by half a dozen beaſts he bought at 15s., and ſold in leſs than a year at four pounds:—but then 'twas a flaſh, a meteor that never more was ſeen. This gentleman, with whom I generally ſpent a week very agreeably every ſummer at Cornhill, was the laſt of my acquaintances who wore the good old ſpring boots.

In 1763, Mr Moorhouſe, from Craven in Yorkſhire, was the firſt Engliſhman that had ever been in the Hebrides buying cattle. In the abſence of her huſband, Mr M'Donald of Kingſburgh, he was kindly entertained by Flora M'Donald, who made up for him the ſame bed that, ſeventeen years before, had received the unfortunate Prince Charles. From Sky Mr Moorhouſe went to Raaſay, whither, in three days, Kingſburgh followed him, and, during a walk in the garden, in a fine harveſt evening, they bargained for 1007 cattle, at two guineas a head, to be delivered, free of expence, at Falkirk. Two days before, he had bought 600 from Mr M'Leod of Waterſide, at 2l. 3s. 6d.

About the year 1773, Duncan Campbell, a name well known throughout the Highlands, bought all the ſale cattle in Barra at 1l. 7s. 6d. a head. They were from eight to ten ſcores in number, and many of them four and five years old ſtots. The Barra cattle are amongſt the beſt in the Iſlands; they are good growers, and, throughout Yorkſhire, none of the kind are in higher eſtimation than they are.

In 1782, Mr S****** at C********** was at great pains to procure the beſt and oldeſt wedders. He bought my worthy and much reſpected friend's, Mr Cranſton in Byrecleugh, and ſome other parcels, full four years old, at 10s. 6d. After fattening them till Auguſt, 300 or 400 of the beſt of the whole were ſold to Gregor Drummond at 14s. 6d. Mr Drummond, who is a man of experience and ſhrewd obſervation, boaſts of them to this hour as the beſt graſs fed ſheep that ever were in Edinburgh market.

In 1803, the beſt lots of Highland bullocks were ſold at about 13l; in 1804 at 10l. 10s. I do not include thoſe of the Duke of Argyle and Mr Campbell of Shawfield, between whom there is a ſort of annual friendly conteſt who ſhall ſend the beſt to market. In 1803, Shawfield's were fairly bought by a Berwickſhire

grazier at about 16l. 16s. The Duke's barren cows were bought at Downe, 2d November laſt year, at 15l., and are now in prime condition, upon the paſtures of an Ayrſhire grazier. This prodigious price for barren Highland cows was probably not far, if at all above their value; as a Kentiſh farmer offered 14l. 10s., and much regretted that he did not get them. Shawfield gained the victory this year. His bullocks were bought for Lord Montgomery at 15l. The ſame Kentiſh farmer was in Forfarſhire this ſeaſon, buying cows for his dairy, and hoſpitably entertained for a week by my friend Mr Gairns.

Whether it is owing to the increaſe of the precious metals, the multiplication of Bank paper, or to whatever cauſe, the fact is certain, that corn and butchers' meat are at preſent much dearer than uſual over all Europe.—Sir H** H******* D********, gave a great entertainment in Edinburgh laſt ſpring, to which I had the honour to be invited. Amongſt every delicacy of the ſeaſon, I could not help taking notice of a great profuſion of very fine lamb, there being no leſs than ſeven quarters of it upon the table, at a time when it was ſeldom to be ſeen. Sir H** whiſpered me, that it coſt 12s. a quarter. The price in the market continued for more than a month pretty ſteady at half a guinea. Mr Niſbet of Dirleton tells me, that at Conſtantinople butchers' meat is very bad, and coſts ſomewhat more than 5d. per pound. The Turks eat very little fleſh meat: 20,600 oxen, and 145,000 ſheep, ſuffice for the whole metropolis for a year. The whole muſt paſs through the office of the chief of the butchers, and the number is accurately known. At Paris it coſts 6d. per pound; if *beau*, a halfpenny more. At Archangel it coſts 2d. or 2½d. At Prague 4d., and at Naples 4d.; but there, too, very little butchers' meat is conſumed. I have ſeen more in John Mellis's ſhop on a Saturday, than would ſupply the whole market at Naples. Such prices are very uncommon at theſe places; indeed they have increaſed in nearly the ſame proportion as in Britain; and I am afraid the conſumers every where have too good reaſon to apprehend they will not again return to their ordinary rates. Yet have I ſeen many ſenſible men entertain ſerious fears leſt the prices of cattle ſhould fall very low, and thoſe of grain return to the common converſion, a rate once well known in Lothian, and ſtill obſerved by the High Court of Teinds, in fixing the augmentation of Miniſters' ſtipends. Rather than argue upon a ſubject, which, like this, does not admit of demonſtration, I frequently tell, and never without effect, Mr Maule's ſtory of the milliner at Brechin, who loſt her ſenſes leſt her cuſtomers ſhould take it into their head to go naked.

When I reflect on the late very alarming high price of corn, and

and I may ſay the preſent price of cattle and of fleſh meat, I cannot help going a ſtep farther, to think how much dearer both would have been, but for the introduction of the potato. Sir John Hawkins brought us this invaluable root, in the reign of Queen Eliſabeth; and, ſo early as Shakeſpeare wrote, it was become proverbial, '*Let the ſky rain potatoes.*' (*Merry Wives of Windſor.*) It ſeems, too, to have been then held in great eſtimation, for we find it coupled with a *fat rump*, as appendages of the *Devil Luxury.* (*Troilus and Creſſida.*) Conſidering how well it agrees with our ſoil and climate, the eaſe with which it is cultivated, and the great quantity of nouriſhing food it yields, it is matter of wonder that it did not come ſooner into general uſe. I well remember the time when it was not quite common, but ſhown, as ſomething curious, in the gardens at Panmure and Tynninghame. Indeed it is not yet twenty years ſince it formed part of the crop upon every farm, and, for nine months in the year, part of the daily food of every poor man's family.

Farmers have failed lately for conſiderable ſums, and no doubt your profound ſcholars will thence infer their general proſperity. Mr Pitt inferred the general proſperity of merchants from the failures in the mercantile world. Farmers failed too, in former times, when they were men of little enterpriſe, and the rents, comparatively ſpeaking, low. D**** L***** gave up his farm of B*******, in 1759, becauſe he owed 130l. to Lord Panmure, who was an indulgent landlord to his tenants. D**** retired to a ſmaller farm in Fife, which he was ſoon obliged to quit, as his brother in London grew weary of paying the rent for him. His humour and his fun did not forſake him, even when he had no more than a tide-waiter's pittance to ſupport him, and that v—— ſt————t B*** C******, to whom he continued attached to his dying day.

P**** C********** in W******* failed for ſome 450l. or 500l. He was a popular man, and his friends bought for him, by ſubſcription, a damned ſulky beaſt of a courſer, which he led about the country, and got plenty of employment for, till Mrs R******** at G*******s*** took ſome umbrage at Peter, and patronized his rival, an Engliſhman of the name of Smith, from Northumberland. Peter declined gradually, and at laſt fell into utter inſignificance.

P**** D****** took the merit of obtaining from the late munificent Earl of Hopetoun, a weekly allowance of two pecks of meal to A***** C*******, his predeceſſor in the farm of A*******. W***** at M*******, thought himſelf happy to get into the barn to thraſh the crop, and to eat in the kitchen of that houſe, the beſt apartment of which had often welcomed him;

him; and the moon has not thrice filled her horn, ſince I obſerved the poor fellow ſnivelling through Haddington market, and paſſing, unknowing and unknown, thoſe very men, with whom, in the days of former years, he had ſpent the merry midnight hours.

The cultivation of turnips upon a great ſcale, has added much to the value of ſoils ſuited to that crop; and, together with artificial graſſes, and early oats, has brought our lands at the foot of the mountains, and thoſe lying upon the ſea-ſhore, nearer to an equality in point of value. In Scotland, turnips are always ſown in drills, which admit of being horſe-hoed. They are as generally ſown broad-caſt in the Southern counties of England. Hand-hoeing is an expenſive operation, however expert the work-people are at it. I have ſeen the turnips in almoſt every county in England, where they are cultivated as a crop; and have no heſitation in ſaying, that, in general, they are far inferior to thoſe raiſed in Scotland; and whether I conſider the weight of the crop, and the expence attending it, or the condition of the ſoil for bearing grain; I muſt prefer ſowing them in drills, and ſo decidedly, that I am ſurpriſed it is not long ere now become univerſal. However, this is but one of many inſtances, where, with their eyes wide open, mankind have ſtopt ſhort upon the very threſhold of perfection. The Romans invented the ſaddle, but never diſcovered the ſtirrup.

Mr F*****, at Park farm in Kent, was, within theſe ſeven years, the firſt who cultivated turnips in drills in that county. He ſows them earlier too than his neighbours, and his crops are rather better than theirs; but the ſoil and climate of Kent are ill ſuited to the growth of this root, ſo that it is rare to ſee what with you would be eſteemed even a middling crop. G***** R***** would plough up the half of them. Pray what became of the action againſt the gardener at W*******, for ſelling kail ſeed inſtead of turnip?

Where, pray, did Mr D***** live? Were his beautiful turnips raiſed in the broad-caſt way? I remember him mentioning a viſit he was honoured with by one of you Eaſt-Lothian farmers.

No more is the culture of grain crops in drills a new diſcovery, as the admirers and followers of Tull and Du Hamel have long eſteemed it. It is common in Arabia Felix; and, as in thoſe eaſtern countries, they never adopt any new modes, it muſt have been ſo for many generations.

I am much pleaſed to hear that my friend P**** B***** is collecting materials for *the Hiſtory and Practice of Stall Feeding*. His

His elegant *Eſſay on Green Crops*, which he has contrived to make equally ſprightly and uſeful, has raiſed very high our expectations of his new performance. I have not been able to trace the practice farther than ſome time between Henry IV. and Elizabeth, though I doubt not his reſearches have ſucceeded better:—

> 'And we ſhall feed like oxen at a ſtall,
> The better cheriſhed, ſtill the nearer death.'
>
> WORCESTER—Henry IV. Part I.

But I muſt be careful not to interfere with his undertaking, and truſt to his good nature to pardon me for recommending to him to write with care, for his work will be read with attention. I can ſtill point out papers written by him in the Weekly Magazine, thirty years ago.

The improvements upon farm machinery, have been greater and more rapid, than may perhaps appear at firſt glance, to one who has not turned his thoughts that way. It is natural that they ſhould eſcape with a ſlight notice of a perſon continually upon the ſpot, and who ſaw them introduced gradually; but at my return, after an abſence of twenty-five years, they ſtruck me with aſtoniſhment.

The Lothians have been ſo long civilized, that no records to which I have had acceſs, nor the moſt diligent inquiries, enable me even to gueſs how diſtant the period is when the farmer's daughters there carried the dung upon their backs to the fields. I pretend not to ſuch a ſtock of knight-errantry, as my friend Mr P****** has ſo often diſplayed, but confeſs I wiſh that I could ſay the creels were not any where allowed to remain long upon the backs of the dear creatures. Truth, however, obliges me to tell, that the diſgraceful practice has ſhocked my own eyeſight, and is not yet entirely extinguiſhed in ſome remote places of Scotland. One of the creels is now in my poſſeſſion; and if you do me the honour to call any time you are in this neighbourhood, I ſhall very gladly ſhew it to you, and am far from averſe to a drawing of it being taken to adorn the next number of your Magazine.

To ſhift the creels from the backs of women, to thoſe of horſes, appears now a natural and very evident ſtep, and, no doubt, originated in the feeling heart of ſome gallant beau, wounded at ſeeing his ſweetheart ſo vilely degraded. But the next ſtep in the progreſs of improvement, the invention of the *ſledd*, and making horſes draw inſtead of carrying, is far leſs obvious. I had for ſeveral years, to no purpoſe, puzzled my brain

brain to imagine what could ſuggeſt a practice that appears ſo abſurd as that of yoking ponies by the tail, which is at this hour to be ſeen in many parts of Scotland, when Lord M*******, to whom I was then on a viſit at D*****, informed me, that as the wild ponies upon the mountains are always caught by the tail, it was not ſurpriſing they thought of yoking them by that member. Two mornings after, he carried me to Crieff fair, where I actually ſaw, what is no doubt familiar to many of your readers, the Highlanders catch by the tail, any poney that a cuſtomer wanted to cheapen. In ſome countries to the north of India, they run to the other extreme, and yoke the oxen by the noſe.

Without ſtopping longer at the practices of the heroic times, I beg to recal to your own memory, the four ſcare horſes you muſt have ſeen in every plough, their hair hanging over their eyes, and ſhoed only in the fore feet, with hair *tuggs*, rude *branks*, and *pab* brechams, exerting all their might to drag along a heavy miſhapen inſtrument, with a mallet in its horn, and a ſoam jingling among their feet at every turn; or a couple of ſtarved rough creatures, refuſing to carry 10 firlots or 3 bolls of barley to market in a clumſy cart. Pray, good Sir, think of theſe things, and compare them with a ſober ſteady horſe, decently harneſſed, carrying, with eaſe to himſelf, four times more grain than the wild ſcatter-brained brute of former days.

Great numbers of cattle are yet put to the plough in many parts of Scotland; in Aberdeen and Banffſhires, ten or a dozen are ſtill ſometimes employed at it. It is now almoſt 40 years ſince I ſaw Lord Aberdeen's overſeer ſell a dozen fine large ſtout animals, looſed from one plough, to a drover of the name of Philips, for ſixty guineas and a new gown to his wife: but lands are every where getting up ſo faſt to the two-horſe plough price, that all others will probably ſoon diſappear. This is not a thought of mine, but methinks it the ſtrongeſt recommendation I have yet heard of that powerful inſtrument. It is not unconnected with my preſent ſubject, for me to ſay, and it may amuſe your claſſical readers to be reminded, that in the days of Homer, oxen, perhaps horſes or mules, were yoked four abreaſt in the plough, as is ſtill the caſe in Galloway, Aberdeenſhire, and other counties in the north. See *Iliad*, X. 419. *Ulyſſes and Diomed purſuing Dolen.*

My reſpected friend at H********** was among the laſt in Haddingtonſhire to adopt the two-horſe plough. I bluſh to think how long he perſevered in the uſe of three horſes, leſs defenſible, in my opinion, than that of four.

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The late T***** R***** was amongſt the firſt to put four bolls of barley into a cart. It is an anecdote conſiſtent with my knowledge, that Mr Law, then recently appointed Sheriff, met the cart, and ſtopped the ſervant to ſend a meſſage to his maſter, importing, that ſo great a load was oppreſſive to the horſes, and might probably break down the cart. †***** †***** in †*** †****** once ſent ten horſes with twenty bolls of barley, to meet David Salmon's carts at Ravensheugh toll-bar. Three horſes of Mr Salmon's carried the whole to his granaries.

Nay, carts themſelves were ſo rare, that, in the beginning of my time, a boy, not older than myſelf, left his charge of cattle amongſt ſtooks in long haltering time, and ran to get a nearer view of one that happened to be paſſing at a diſtance. This carries my mind back to the introduction and common uſe of wheel carriages in this iſland. In Queen Elizabeth's days, 'a coach was eſteemed a ſtrange monſter, and the ſight of it put both horſe and foot into amazement. Some ſaid it was a great crab-ſhell brought from China; and others, that it was one of the Pagan temples in which cannibals adored the Devil.' We find Prince Charles and Buckingham making their Quixotic expedition to Spain on horſeback, and teaching poſt-hackneys to leap hedges. Poſt-chaiſes were introduced into the French armies in the time of Lewis XIV. Thirty-four coaches were taken at the battle of Blenheim. But to come to our own day. I have ſome faint remembrance of all our great men travelling poſt on horſeback to and from London. The Duke of Argyle had, like others, a pair of wide riding-breeches, in which he buttoned the ſkirts of his coat to keep them clean. He generally ſtaid a night, in paſſing, at Gilmerton, or with Lord Milton at Salton-Hall. I have heard my father mention being with Sir Francis Kinloch one evening when his Grace arrived in this plight, whipping up the poſt-boy's horſe, who ſcampered before to ſhow him the way.

Every thing about the farmer, within doors and without, hath kept pace with the improvement upon his implements. He himſelf is better clothed; he wears no home-made cloth now-a-days; every article he uſes is of the beſt Engliſh fabric.

The farm-houſes are neat and clean; ſome of them handſome boxes, elegantly furniſhed. Unqueſtionably, the beſt farm-houſes in the county have been built by tenants at their own expence, with the ſpirit of proprietors, though perhaps, indeed, with more taſte than prudence.

The hinds' houſes and cottages have ſhared in the general improvement. Inſtead of abominable, ſtinking, naſty hovels, which

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they were in the beginning of my time, without a chimney, and with a bit of ſieve and yolk of glaſs to admit the freſh air and the light of day, and an old bonnet ſtuffed with ſtraw to keep them out, they are now pleaſant, cheerful habitations, with caſement windows of a proper ſize.

The ſtables—Good G—! how often have I been alarmed and frightened out of my ſleep by the fighting and ſcreaming of a dozen of horſes ſtanding looſe in the ſame undivided ſtable, and the reſponſes of the courſer thundering in his traviſe in the byre beyond the partition.—I ſicken at the recollection of the byre, and turn from it with diſguſt.

The œconomy of their families, and their modes of living, are changed greatly for the better. Farmers here have been long on this ſide of that ſorry meſs, on which the poor huſbandman ſubſiſts in many counties, and that ham and egg dinner, and rarely a fowl, on which he regales a friend. Their larders are regularly and well ſupplied. My mind is full of antiquity, and ſo frequently recurs to diſtant times, that I am aſhamed of it: it looks ſo like an oſtentatious diſplay of extenſive reading, which I am ſure I was never deſervedly accuſed of. Herodotus informs us, that the Scythians were the firſt to diſcover, what every cat in the country knows now-a-days, that the beſt of the milk riſes to the top. I believe ſome of the more early Greek dialects wants even a word for butter. That the richeſt of the milk comes laſt from the cow, is well known to us all; for who has not heard of *afterings?* But it was reſerved to my much eſteemed and very ingenious friend Dr Anderſon, to aſcertain, by actual experiment, that the laſt of the milk ſometimes contains ſixteen times more butter than what comes firſt. Yet we find that great *blockhead* Polyphemus firſt milking his ewes, and afterwards ſubmitting their teats to the lambs. It is unpardonable that this ſhould ſtill continue to be the practice in many parts of Ayrſhire and in Galloway, where the calf is not permitted to ſuck before the woman has done milking. This matter is ordered better in the Highlands, where the practice is quite the reverſe.

Their hen-houſe and dairy afford at all times an agreeable variety of excellent food. Their tables abound with the neceſſaries of life, are every day comfortably ſerved, and, upon occaſions, ſuch as any man might ſit down to.

Their kail-yards formerly contained little beſides greens, beans, peas, and the more ordinary pot-herbs. Now, we need not look far for regular gardens, with variety and plenty of excellent ſmall fruit, and walls covered with fine trees. Melon grounds and a grape-houſe may be ſeen in more inſtances than one, and in the

the poſſeſſion of perſons whoſe œconomy was never called in queſtion.

Their cellars are well ſtored, though here, but only here, I muſt confeſs the advantage, with regard to both kind and quality, to have been greatly on the ſide of days that are gone. Where can we now find ſuch claret as Blanerne and I once drank at a farmer's near Dunſe, with whom my old friend carried me to dinner? or that which Sir Francis Kinloch '*drew from his dark retreat of many years*'—under W****** H******'s bed, whom he occaſionally viſited at H*****. Theſe I imagine to have been produced only to particular gueſts, and by no means the liquor they ordinarily entertained their friends with; at leaſt not ſince the time it was retailed in Edinburgh at 8d. the pint-ſtoupful. Indeed, till of late, it was not common for farmers to entertain with port wine, or to buy more than half a dozen at a time, and that only when the wife lay in. Nay, I have known a farmer worth thouſands, with difficulty prevailed on by his friends to ſend for a ſingle bottle of ſherry when he found himſelf ſick. The late additions to the price make the expence a very ſerious conſideration; and the practice is rather loſing ground before the habit was ſo long eſtabliſhed as to make the privation of it painful. It is, however, rather upon the increaſe in Berwickſhire, where the tenants are perhaps more expenſive, or leſs prudent, or both. The common liquor after dinner was excellent rum or brandy punch, which has now, in almoſt every family, given place to humble whiſky tody in great abundance, though the wine decanters are ſtill preſented, and a few glaſſes of that taken at firſt. I have often heard Sir John Halket tell, that when he lived at Goſsford, he bought a hogſhead of claret from Mr Hay in Craigielaw for 10l., or about 8d. a bottle. I am informed, that a good guide can ſtill lead to a friend who produces occaſionally a bottle of good fair *vin de Bourdeaux*.

That charming *two-penny*, too, which I think of with pleaſure at this moment, and for which, in the Torrid Zone, I have often ſighed in vain, lives only in the memory of its friends. Thanks to the puſillanimity of our forefathers, who ſo tamely ſubmitted to the extenſion of the Exciſe laws to this country. Had the general ſpirit of the nation equalled that of the folks at Glaſgow, or of the Edinburgh brewers, we ſhould ſtill be enjoying our favourite beverage.

There are few of thoſe borrowings now-a-days, that I well remember. How often have I ſeen loaves of bread, bowls of ſugar, and cupfuls of tea ſent for upon the ſpur, when a gueſt unexpectedly popped in, and knives and forks and ſilver ſpoons to deck out the table upon a regular invitation. I bluſhed deep when

when I obſerved Mrs —— eye me amuſing myſelf with endeavouring to diſcover, from the cypher, to which of the neighbours the extra ſpoons belonged; for I knew well ſhe had not received more than half a dozen at her marriage.

When the miſtreſs lay in, the whole neighbourhood was inſtantly acquainted by meſſengers deſpatched in every direction. The compliment was returned by frequent inquiries after her's and the child's health, till her month was up. A couple of lines in the newſpapers has ſuperſeded this good old cuſtom; and the large punch-bowl, that made its appearance only at Chriſtmas, ſtands now in ſome old cupboard, uſeleſs and forgotten.

I have not mentioned any article upon which there has been a greater change than their pocket and tavern expence. In the days of *Poſty Johnſton*, the farmer, when he went to Haddington market, did not dine, but, when he came away, took a bottle of ſtirrup ale with ſome burgher friend; and Poſty's Court, now Fairbairn's coach-yard, uſed to be rammed quite full of horſes that got nothing to eat, as ſtill takes place at Gifford fair. Baron Scoughall at Broomhouſe departed from the general practice. He annually gave Mr Fall at Dunbar a cart load of peas-ſtraw for a four gallons bottle of brandy, and a ſtable to put his horſe into when he came to town. The Baron was an arch wag: the bargain was made ſimply for a *bottle:* he went himſelf for the firſt year's, with a four gallons bottle fixed in a wheel-barrow. Mr Fall ſaw he was taken in, but humoured the Baron's joke, and continued the annual payment ſo long as he lived. Ordinaries at Haddington, at 4d. a head, were firſt eſtabliſhed by Willie Grieve and Baillie Shortleſs. Theſe were ſoon eclipſed by 1s. 6d. or 2s. clubs at M'Call's and Gairdner's, which are now, in their turn, ſucceeded by others, at Sang's, Gordon's, Fairbairn's, and Whitehead's, where, for three or four ſhillings, a plentiful dinner may be enjoyed, with a moderate portion of liquor, and a good-humoured converſation.

Sixty years ago, my old friend F******* W******, who was no ſcrub, uſed to go to Leſſudden fair, and breakfaſt on haggies and cold roaſt lamb, ſpending no more than eightpence upon the journey. It would not now pay the turnpikes. D**** S******* uſed to walk 112 miles to and from Campſie, without ſpending more than twentypence, unleſs when he met with an old ſchoolfellow, and had a debauch with him at Edinburgh.

†**** †******* was amongſt the firſt to go to London, merely from curioſity. He travelled in the ſecond poſt-chaiſe with L** †*******'s ſervant, his Lordſhip and his miſtreſs being in the firſt. †****'s return was rather abrupt, and earlier than his friends

friends expected. I have heard H********** drily remark to him that he ſeldom talked of this expedition.

Nearly about the ſame time, J**** D****** in T*********, G***** C********** in W*********, and my much reſpected claſs-fellow J**** S******* in K*****, allowed themſelves the ſame indulgence. G***** has often told me, and ſeemingly with much regret, that the journey coſt him exactly the profit he made by a ſcore of Highland nolt he bought at Falkirk the October preceding.

This journey is now ſo common, that it is no longer thought extraordinary, but is quite loſt in the blaze of †***** †*******'s little tour and journies to P****, in which it is ſaid he has ſpent hundreds; and yet his name and extravagance never, till now, met in the ſame ſentence.

I have, in theſe little anecdotes, kept my eye directed chiefly to Eaſt Lothian, the county in which you live. There, I have ſome intereſt, and there your Magazine is generally read. The inferences, I think, I am fully warranted to draw from every thing I have ſaid, and, from the moſt ſerious conſideration I am able to beſtow upon the ſubject, are, that capital much greater than formerly is now neceſſary to enable a farmer to carry on his trade, almoſt every article, whether of profeſſional, perſonal, or family expence, being ſeveral times its former price; that wealthy tenants can afford to pay high rents; but I muſt deny the reverſe of the propoſition, though I freely admit that a ſmart addition of rent may have the effect to quicken his induſtry; and that, in the general improvement of all things in this iſland, farmers are not behind hand; that they have their full ſhare in the increaſe of our comforts, and are the moſt thriving claſs of the community; and thoſe of Eaſt Lothian, notwithſtanding the high rents they pay, and the ſenſeleſs outcry againſt the oppreſſion of their landlords, the moſt thriving of that claſs.

I have made bold to dedicate this trifle to the Earl of Haddington, who ſhines equally in the capacity of landlord to his tenants, or at his table, at which I have ſometimes the honour to ſit down; and it is to his kind, eaſy hoſpitality, that he is indebted for the patronage of this little work, if it is of value ſufficient to create a debt.

AN HERITOR.

21*ſt June* 1804.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Shortneſs or Total Want of Leaſes in ſome parts of Scotland.

SIR,

IN the few remarks that I am about to make, I take my ground from the firſt query in a ſet of queſtions on general ſubjects of agriculture in the Firſt Number of your very excellent and uſeful Magazine. The queſtion runs in theſe words: 'Whether is it moſt advantageous to the State, that land ſhould be cultivated by the proprietors, or that a right to cultivate the ſoil ſhould be aſſigned, for a limited time, to other perſons, upon certain terms, preſtations, and limitations?'

Among the many topics that have been treated of in your Magazine, I do not recollect to have ſeen this one diſcuſſed in a way perfectly to my mind. It appears to me, that you have done rightly in putting this queſtion on the broad baſis of the ſubject of it being advantageous or diſadvantageous to the *State*; for, as I conſider the land as the capital ſtock of the State, any inquiry into the beſt mode of managing this capital ſtock muſt become doubly intereſting, when ſtated upon this ground, from what it would have been if the inveſtigation had been put on any other.

There are three great ſources of the wealth and proſperity of ſtates,—commerce, manufactures, and agriculture. Of theſe, the two firſt are fleeting and precarious; the laſt only is ſtable and permanent. As a confirmation of this remark, we have only to ſay, that it is long ſince the great tide of commerce has left the cities of Italy and Flanders; but that Lombardy, Tuſcany, and Belgium ſtill continue to be among the beſt cultivated countries in Europe.

I wiſh to ſee this queſtion treated as a moral and political, rather than as an agricultural and economical one. The ſolution of it involves the prime intereſts of the State, and is intimately connected with its ſtability and proſperity. The diſcuſſion embraces the happineſs of the people, the conſequent increaſe of population, the improvement of the country, the multiplication of the means of ſubſiſtence, the increaſe of the ſtock of national wealth, and all thoſe objects which wiſe ſtates, and patriotic princes and prudent miniſters have ſhown the greateſt anxiety to cheriſh and promote.

A change in the ſentiments and purſuits of the people, and of the meaſures of government of a particular country, is ſometimes more quickly brought about than, I believe, is generally imagined.

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A ſingle inſtitution will diſplay the ſpirit of a legiſlature; a ſingle remark or enactment will unfold the character of a prince; and a ſingle literary work will correct or eſtabliſh the opinions of an age. When the older Bernſtorf got a law paſſed, that the Daniſh peaſants ſhould be free, he effected a revolution in the ſentiments of the government of his country. When Henry IV. of France expreſſed a wiſh that all the peaſants and labourers in his dominions might have a fowl on the table on Sundays, he intimated, in a peculiar and laconic manner, that benevolent concern which he took in the proſperity, comfort, and happineſs of the people, which, we have cauſe to know, had not been much the objects of attention of ſome of the princes before his time. When the ever memorable Frederick II., in the early part of his reign, ſeemed only intent on improving the diſcipline of his army, it did not portend that, in the later periods of it, he would labour with ſo much aſſiduity in promoting the agricultural improvements of his country, as to inſure to his name the celebrity of a patriot; and it is only becauſe the more brilliant renown of the warrior eclipſes the modeſt and leſs obtruding merit of the patriot, that he is not as well known in the latter capacity as in the former. When the Britiſh Legiſlature aboliſhed the heritable juriſdictions in Scotland, in the year 1748, and thereby diſſeminated the bleſſings of equal liberty among the people, I believe it was ſcarcely foreſeen that the Lowlands would, in the courſe of half a century, become one of the beſt cultivated countries in Europe. When Mr Malthus publiſhed his Eſſay on Population, he demonſtrated, I ſuppoſe, to the ſatisfaction of every one, that the population of every country will be in proportion to the means of ſubſiſtence provided for the people, without the interpoſition of ſome obvious and powerful checks.

I conſider this queſtion to be of ſuch magnitude, that if I had time and talents for the proper diſcuſſion, I would introduce it with the words of Monteſquieu, when he enters on the ſubject of commerce—'Fain would I glide down a gentle ſtream; but I am hurried along by a torrent.'

As, in the preſent circumſtances of Great Britain, I conſider it entirely impoſſible that the whole of the lands can be cultivated by the proprietors; ſo the anſwer to the latter branch of the query naturally points out itſelf—'that a right of cultivation, for a limited time, ſhould be aſſigned to others.' Large tracts of land can, in no country whatever, be cultivated by the proprietors, but in thoſe ſtates where the great body of the people are in the condition of villanage or ſervitude, as in Ruſſia, *cidevant* Poland, and other kingdoms in the north of Europe. This mode of cultivation, then, cannot poſſibly take place in Britain, where the people are free. The

only other way, in ſo far as occurs to me, of large tracts of land being cultivated by the proprietors, is in the caſe of newly diſcovered countries, as America, New South Wales, &c. where the mother country, or dominant ſtate, makes grants of portions of land to individuals, for the ſake of clearing it, and where the grantees continue for a certain time to cultivate the allotments made to them, by themſelves and their families, and ſometimes by ſlaves. This mode of occupation and cultivation does not apply to the preſent ſtate of this country.

If it appears, then, that the beſt mode of cultivating land in Britain, is by aſſigning the right of cultivation to others, for a limited time, a natural queſtion occurs, What ought to be the period of duration of this time? But, inſtead of taking it upon me to determine what is the proper and moſt advantageous endurance of a leaſe, (which is not my preſent purpoſe), and whether it ought to be for 9, or 19, or 31, or 38 years, or for any longer, or ſhorter, or intermediate period, I am rather inclined to be of the opinion, that, in different circumſtances, the period of aſſignment may be advantageouſly made of longer or of ſhorter duration.

But in one point I am deciſively fixed; which is, 'That the cultivator ſhould have a certainty of poſſeſſion of the land for ſome reaſonable given ſpace of time.' And this brings me to what I had chiefly in view in theſe obſervations, namely, the ſhortneſs, or total want of leaſes which, I underſtand, prevails in ſome diſtricts of Scotland, and which, as it appears to me, muſt operate as an effectual bar to agricultural improvements, or good management of any ſort, ever getting into theſe diſtricts.

From what I have obſerved, I now conſider the opinions and practices ſanctioned or condemned in your Magazine as the teſt of juſt reaſoning, and of good or bad management, in matters of rural economy, in Scotland. And I have ſaid, on another occaſion, that I do not conſider theſe intimations of approbation or diſapprobation ſo much calculated for the opulent, and independent, and enlightened farmers, in the well cultivated counties, as for the poor, and oppreſſed, and ignorant cultivators of the ſoil, in the remote diſtricts: So I hope you will take theſe latter under your ſpecial protection, and lend your powerful aſſiſtance to meliorate their adverſe and much to be lamented condition.

At the firſt bluſh of the propoſition, one would imagine that there needs not a ſingle word of argument or illuſtration to prove, that where the cultivators of the ſoil have no certainty in the poſſeſſion, they will never be diſpoſed to pay any attention to amelioration. But, on the contrary, where their right of poſ-

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ſeſſion extends only from year to year, from crop to crop, they will never have any thing farther in view, than to take as much from the land as it will yield for the time, regardleſs of the ſtate into which it is brought, or in which it is left. Thus, wherever the cuſtom of very ſhort leaſes, or of no leaſes, prevails, we may lay our account that the country will continue a dreary and barren waſte in perpetuity. The granting of leaſes, then, muſt be evidently the advantage of the proprietor, as well as of the public. Indeed, I conſider that it is to the permanent leaſes that were begun to be given ſoon after the beginning of laſt century, that we owe the foundation of the great improvements that have been ſince made in Scotland.

When the late Empreſs of Ruſſia, in the inſtructions that ſhe gave to the commiſſioners appointed to frame a new code of laws for the Ruſſian empire, wrote with her own hand, 'that agriculture could never proſper in a country where the cultivator poſſeſſed no property,' ſhe raiſed herſelf above the level of her ſex, and above the ideas of the people whom ſhe ruled over. With certain modifications, I fear that the enlightened obſervation of the Empreſs may apply to the people in ſome diſtricts of Scotland at this day. Without property, or the means of acquiring property, I ſuſpect that their condition is not raiſed many degrees above that of the peaſants in Ruſſia. Kept in a ſtate of perpetual ſubjection and dependency, I doubt their enjoyment of liberty conſiſts too much in the name.

I am not by any means ignorant, that the evil of which I here complain, of ſhort leaſes, or the total want of leaſes, prevails on ſome of the largeſt eſtates, and in ſome of the beſt cultivated diſtricts in England. And although I am clear that the practice muſt be attended with very bad conſequences even there, yet, as there is a greater maſs of wealth in the hands of the body of farmers in England, than there is yet in the hands of thoſe in the mountainous and remote diſtricts in Scotland, the pernicious cuſtom does not appear with ſo much promineney in the one country as in the other. But, on the other hand, we uniformly ſee, that where a ſufficient length of leaſe is given, it immediately operates as a ſtimulus to the moſt ſpirited and ſubſtantial improvements; as inſtances of which, I need only mention thoſe made by the farmers on the Duke of Norfolk's eſtate in the neighbourhood of Sheffield in England, and thoſe made by the farmers on the Duke of Queenſberry's eſtate in Peeblesſhire in Scotland.

I deny not, that on ſome eſtates, both in England and Scotland, the tenants continue to poſſeſs, at leaſt very lately did poſſeſs, the lands without leaſes, from year to year, and yet ſeem

contented and happy, conforming themſelves generally to a ſimple mode of agriculture, adopted by themſelves, or preſcribed by their landlords; of which cuſtom, examples may be given of the farmers on the eſtate of a great Engliſh nobleman, in one of the moſt northerly counties, (Duke of Northumberland), and of thoſe on the eſtate of the preſent Member of Parliament for Aberdeenſhire. But although theſe examples may be ſtated in favour of a very pernicious practice, yet I am fully of the opinion, that the ſanction given ariſes almoſt ſolely from the excellent characters of the reſpectable nobleman and the benevolent gentleman alluded to.

Although theſe, and perhaps other inſtances of the ſame ſort, may be given, yet it cannot be denied that the cuſtom is a bad one; and, as ſuch, I wiſh to ſee it totally eradicated. I deſiderate ſuch a thorough change of ſentiment in the minds of people in general, that no landlord would let, and no tenant would take his farm, but upon a permanent leaſe of a certain reaſonable endurance. What I contend for, in this caſe, is the eſtabliſhment of a general maxim; and although this may appear difficult to be effectuated without poſitive law or inſtitution, yet we have ſeen revolutions in ſentiment and practice ſometimes brought about by a ſingle ſalutary regulation. When a law was made allowing an heir of entail to get allowance of the expence of certain improvements made on the eſtate in tail, there was a general rule laid down. When the Court of Seſſion in Scotland paſſed the act of ſederunt reſpecting the removal of tenants from their farms, and that act not having been interfered with by the Legiſlature, they laid down a general rule. When, ſome years ago, Lord Mansfield and the Court of King's Bench decreed, that whenever a negro ſlave comes to England he ſhall be a free man, the Court eſtabliſhed a general maxim. When, a few months ago, Lord Ellenborough and the ſame Court found, that a military volunteer may reſign, they fixed a general rule for all volunteers whatever. In like manner, I ſay again, that it is a general maxim that I wiſh to ſee eſtabliſhed; and although it may be difficult to bring this about without poſitive inſtitution, yet, by frequently inculcating the pernicious conſequences of the oppoſite practice, the wiſhed-for reformation may perhaps in time be effectuated.

With the exemption from tithes and poor-rates; with the ſtipulations in his leaſe, ſupported and ready to be enforced by law; and with a compulſitor within his power for the diviſion of lands lying in common, joined to the general benevolence of landlords, the Scotiſh farmer, perhaps, enjoys as many advantages, clogged with as few drawbacks, as the cultivator of the

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ſoil in any country whatever. Of the baneful practice of withholding leaſes, or granting them of very ſhort duration, which, however, only prevails in certain diſtricts of the country, he has perhaps chiefly to complain. But this evil is ſo great, that it ſtrikes at the root of all improvements, breaks the ſpirit of the people, keeps them in perpetual poverty and dependency, and, as it were, 'freezes the genial current of the ſoul.'

Could reſtrictive injunctions be impoſed upon the people in a free country, I know of no ſubject that ſo much demands the interference of the legiſlature as this, of compelling the proprietors of land to give leaſes to their tenants, of certain duration at leaſt. The improvement and proſperity of the country are concerned in it. The increaſe of the national produce, upon which national proſperity ſo much depends, reſts upon it. The affectionate regard of the lower orders of the community towards the higher, which the preſent times ſo much require, hinges upon it. Never will a tenant think of ameliorating his farm when he has no certainty of poſſeſſion, beyond the crop preſently among his hands. Never will he lay out money, if he has it, upon improvements, of which another may reap the fruit. Never will he deviſe ſchemes of varied ſucceſſions of crops, which, at the diſtance of ſeveral years, may repay him for the expenditure and induſtry of the preſent, when he is uncertain of enjoying any of theſe crops. Never will the face of the country be improved, when the cultivators have no intereſt in the improvement, but perhaps the reverſe; and till a reformation is brought about in this reſpect, we may lay our account that the ſame poverty and miſery will continue to prevail among the tenantry where the practice exiſts, as prevailed generally among the tenantry of Scotland, in the end of the ſeventeenth, and in the beginning of the eighteenth centuries, of which Fletcher of Saltoun, Law, and other writers of that time, ſo feelingly complain; or which, we are told, prevails among the loweſt deſcription of tenants in Ireland at this day; and that we know prevailed among the whole body, nearly, of the farmers in France, before the revolution.

As well may it be ſuppoſed that a country will be equally well cultivated by ſlaves as by free men, as to ſuppoſe that it will be equally well cultivated by thoſe who have no intereſt in the ſoil, as by thoſe who have. In the firſt inſtance, the labour is enforced by taſkmaſters, and the fear of puniſhment; in the other, it is performed from a ſenſe of duty, and a feeling of intereſt. In the one caſe, more bodily ſtrength is exerted; and in the other, prudence, ſagacity, ingenuity, and the other nobler faculties of the human mind. In the former caſe, compulſion is the only ſtimulus; in the latter, the moral ſentiment operates.

We have Lord Lauderdale's ſanction, were it wanted, for ſaying, that the increaſed produce of land, occaſioned by the wiſe application of labour and capital, is that branch of the property of ſociety which appears capable of unlimited increaſe; and, the more it is augmented, the more will the human ſpecies abound in opulence and in number: But never will this labour and capital be applied, without a certainty, at leaſt a proſpect, of return.

Thank Heaven, the evils complained of exiſt only in certain diſtricts of the country. The opulent and enlightened farmers over the greateſt part of the Lowlands of Scotland, are too wiſe to riſk their capital, and exert their induſtry, on a precarious tenure. It is only in the Highlands, and leſs enlightened parts, that the grievance prevails to an alarming extent. But as it is certainly to be wiſhed that pernicious practices were eradicated from every part of the country, and that the tide of proſperity might flow with an equal current in every direction, I know of no means whatever that could contribute ſo generally to this deſireable purpoſe, as that of granting to the cultivators of the land a certainty of their poſſeſſions. No matter whether theſe poſſeſſions are of larger or ſmaller dimenſions, of better quality, or of worſe; ſtill let the poſſeſſors have a certainty of poſſeſſion. The extent of farms is a different matter, which is not at preſent taken into conſideration.

In tracing back the hiſtory of Scotiſh agriculture for a century paſt, we ſee that all the moſt eminent and ſucceſsful improvers gave leaſes of their lands as ſoon as improved; as may be inſtanced in the caſes of Mr Cockburn of Ormiſton, Lord Finlater, Lord Strathmore, and others. At a later period, Mr Fairlie of Fairlie, on his own eſtate, and on the eſtates of the Earl of Eglintoun, and all the great improvers of the preſent day, have followed the ſame plan. Wherever leaſes of reaſonable endurance prevail, we ſee the tenants wealthy, induſtrious and thriving; and wherever they are withheld, we ſee the tenants poor, indolent and ſtationary. We have only to caſt our eye over the ſtatiſtical accounts of Scotland, and the county ſurveys both in England and Scotland, to ſee that want of leaſes, or very ſhort leaſes, are uniformly ſtated among the great bars to improvement.

Gladly would I ſuppoſe, that the evil of which I complain exiſts not to a wide extent; but of its actual exiſtence I am afraid there is not room to doubt. I have ſometimes endeavoured to amuſe myſelf with deviſing plauſible reaſons, that could induce the proprietors of land to decline giving leaſes to their tenants. I have thought of the idea of dependency, in keeping a large body of people more in ſubjection to their will; but ſurely this motive

tive can never weigh in the preſent day, when it is known that the firmeſt tie of attachment, and even of ſubjection, conſiſts in affection, and a ſenſe of gratitude for favours received. Were we to endeavour to account for the practice, on the ſcore of intereſt, we would be equally wide of the true mark, as it can certainly never be the intereſt of any man to keep thoſe connected with him in a ſtate of poverty and miſery. A tenant will ſurely give more rent for his farm, when he has a leaſe for a reaſonable time, than when he holds it only from year to year.

But from whatever conſiderations the practice may ariſe, of all the general ſubjects that I have ſeen treated of in your Magazine, it appears to me that this is by far the moſt extenſively important. In vain will Lord Kaimes have exerciſed his ingenuity in deviſing the proper conditions of an equitable leaſe, if landlords are determined not to grant any leaſes at all. In vain will Sir John Sinclair have done more to inveſtigate the ſituation, and to ameliorate the condition of the poſſeſſors and cultivators of land, than any other man preſently exiſting in the Britiſh dominions, if the tenants on the eſtates, perhaps in the near neighbourhood of his own, ſhall at this day be occupying their farms at the good-will, and by the ſufferance of their landlords. In vain will Sir William Pulteney have made the patriotic foundation of a profeſſorſhip of agriculture, if a large portion of the people are kept in a political ſituation unable to avail themſelves of the inſtructions of the profeſſor. In vain ſhall we boaſt of the favourite names of David Hume and Adam Smith, and other writers on political economy, who have fixed the principles of the proſperity of ſtates on a ſurer baſis, than the writers of any other country whatever, if their maxims have not had influence to induce the proprietors of land to grant a certainty of poſſeſſion to the cultivators, without which no good cultivation will ever take place. In vain ſhall we talk of the ſuperiority of our agriculture, when ſome of our farmers are in a more uncertain, and leſs enviable condition, than the *adſcripti glebæ* on the lands of the feudal barons, or the ſerfs on the eſtates of the boyars in Ruſſia. Finally, the magnificent ſchemes of government for the improvement of the Highlands will be unavailing, if, when the people have got ſome capital put into their hands, they cannot have the opportunity of inveſting that capital on a ſure and firm tenure.

It appears to me, then, that till this great evil is remedied, you and the ingenious correſpondents in your Magazine may long write on particular branches of agriculture with leſs general effect. You may diſcuſs the nature and qualities of ſoils, and of manures; you may recommend one rotation, or another rotation of crops; you may expatiate on the advantages of encloſing, and draining,

draining, and cleaning land; you may recommend the ſyſtem of cattle-farming, or of ſheep-farming, and give the preference of one breed of black cattle or of ſheep to another; you may diſcuſs the ſubject of the proper ſize of farms, and of labouring with horſes and with oxen; you may inculcate the peruſal of the works of all the writers on agriculture, from Virgil and Columella down to Mr Arthur Young and Dr Anderſon, not omitting the numerous publications that are every day iſſuing from the preſſes of Germany, France, Italy, and other countries; and you may do all theſe things with a very diminiſhed effect. But till you have obtained for the poſſeſſors and cultivators of the land, a certainty of enjoyment of their poſſeſſions, at leaſt for ſome reaſonable determined ſpace of time, you will never be able to give the agriculture of Scotland that real and ſubſtantial aid, which I truly believe it is your wiſh, and the intendment of your Magazine to give. Were it proper to mention particular names, I would ſay that this was a fit ſubject for the talents and ingenuity of Mr Findlater; as, from the ſpecimens which that gentleman has already given, he ſeems well qualified to write on both rural and political economy. Or, if Dr Skene Keith would undertake the diſcuſſion, he is able to combine the comprehenſive views of the philoſopher with the minute attentions of the agriculturiſt.

Removed to a great diſtance, as I now am, from the objects on which I have endeavoured to ſpeak, and engaged at preſent in purſuits of a very different nature, it is impoſſible that I can have exhauſted a ſubject connected with the firſt intereſts of ſociety. All that I pretend to, on this or any other occaſion, is to offer a few ſuggeſtions, which may be enlarged and improved upon by ſome of your correſpondents who have more leiſure, and are better qualified for the taſk. It appears to me that a portion of your Magazine could not be applied to a more valuable purpoſe, than the elucidation of the ſubject to which I have endeavoured to draw your attention. And if I ſhall be fortunate enough to excite ſuch a ſpirit, I ſhall account the time and pains neceſſary for throwing together theſe few thoughts and ſuggeſtions well beſtowed. I am yours, &c.

AMICUS SCOTIÆ.

London, 10th July 1804.

TO

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Uſe of Steam in Drying Malt, Grain, and Potatoes; with Obſervations on Highland Potato Huſbandry.

SIR,

I BEG leave to communicate, through the medium of your valuable Publication, the reſult of ſome experiments I happened to try ſeveral years ago, a ſhort ſketch of which was communicated to the Board of Agriculture, ſoon after its inſtitution; but of which no notice was taken.

It occurred to me, that barley might be made to germinate, and to form malt, by the heat and moiſture of ſteam; and that the malt already made might be dried by the heat of the ſame ſteam which moiſtened and cauſed germination on a new quantity of barley.

To aſcertain this point, I procured a ſmall tin-boiler, with a long tube extended from its top, ſimilar to a ſmall ſtill. The boiler had a ſmall tube inſerted in its ſhoulder, by which water might be introduced, and cloſed by a cork. A barrel had a ſquare aperture cut in its ſide, about three inches above its bottom, and accurately cloſed by a ſtopper of wood. The other end of the barrel was taken out, and, in place of wood, it was accurately cloſed by a tinned plate.

The barrel being placed upon a pedeſtal, a quantity of barley was introduced by the aperture already deſcribed, and equally ſpread upon its bottom, to the depth of near three inches. The boiler, half filled with water, being placed upon a ſmall furnace, had the end of the long tube extending from it inſerted in the bung-hole of the barrel, and made tight by wet paper.

Soon after the water began to boil, the barrel was filled with ſteam, and the tinned plate upon its top became hot. Upon this was ſpread a quantity of wet malt, which was occaſionally ſtirred, and it ſoon dried into what the brewers call *pale malt*; that is, malt perfectly free from calcination, which gives a brown or porter tinge to the ale.

Meanwhile, the barley in the bottom of the barrel became thoroughly ſoaked by the moiſture, which dropped from the tinned plate above. It ſwelled; but, though I tried ſeveral parcels of the ſame grain, it never was obſerved to germinate.

I afterwards learnt, that this grain had been much injured by a wet harveſt, and that it had been kiln-dried to make it keep. Whether its want of germination was owing to this cauſe, or to its excluſion from oxygen, I cannot pretend to ſay; for at

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that time the power of oxygen, in ſtimulating the germination of ſeeds, was not generally known.

It afterwards occurred, to try whether potatoes might not be dried by the heat of ſteam, ſo as to preſerve all their principles unchanged.

For this purpoſe a few of them were boiled, their ſkins taken off, and bruiſed by a blunt ſtick, uſually employed for that purpoſe. The bruiſed potatoes were equally ſpread upon the tinned plate already deſcribed, and frequently ſtirred, while ſteam was blown into the barrel.

In drying, the potatoes were conſiderably reduced in bulk, and concreted into ſmall hard bits of various ſize; but few exceeding the ordinary ſize of peas. Theſe bits were pounded in a mortar, and reduced to a meal or flour, which retained the natural taſte of the potato, only more concentrated.

Parcels of this meal were expoſed in rooms without fire, and did not exhibit any ſenſible tendency to abſorb moiſture, or to become damp; while, in the ſame places, oat-meal, ground from oats hard dried, became ſenſibly damp, and increaſed in weight. Other parcels were repeatedly expoſed to very intenſe froſt, and as long as my obſervations were afterwards continued, they never exhibited any ſenſible alteration of quality, in conſequence of the froſt.

Theſe experiments were made during the winter of 1794-5, when the ground was covered with deep ſnow; and, as I left the place early in ſpring, I had no opportunity of trying whether other roots, or plants, might not be preſerved, by drying them with ſteam, as well as potatoes; nor has any opportunity of following out theſe experiments ever occurred to me ſince.

Perhaps the failure of germination in the barley may have been cauſed by the extreme cold which prevailed while the experiment was made. My idea was to ſubject the barley to a warm ſummer ſhower, from the ſteam condenſed on the tinned plate above it, and to preſerve its heat, as nearly as I could, from 100° to 150°, which is the heat exhibited by good ſoils, even early in the ſeaſon, after expoſure to the ſun's rays. But however I might manage matters during the day, I always found my barley nearly frozen next morning. Perhaps, in an apparatus of large dimenſions, where ſudden variations of temperature cannot take place, the experiment might have ſucceeded better.

But whatever cauſe may have obſtructed the germination of the grain, I flatter myſelf that ſome uſeful reſults may be deduced from the experiments I have attempted to deſcribe.

1. That the beſt *pale malt* for making beer, may be produced, and only produced, by drying it with ſteam.

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2. That all grain which is reſerved for ſeed, or which is afterwards intended to be malted, ſhould have its dampneſs corrected, and be rendered fit for keeping, only by the heat of ſteam; becauſe it is well known, that expoſure to a naked fire, however cautiouſly it may be managed, deſtroys a great part, if not the whole, of the embryo germs of ſeeds.

3. From the ſlight opportunities I had of making obſervations, it appeared that meal, from grain over-dried, after a ſhort expoſure, more greedily abſorbed moiſture, and ſooner became damp, than meal from grain that had been moderately dried. Hence that drying by ſteam is preferable to any other mode, for grain that is to be reduced into meal.

4. It appears certain, that potatoes may be reduced into meal, or flour, capable of being kept any length of time, or of being exported to any part of the world. In place of the peſtle and mortar I employed, they may be ground in any ordinary mill, or even converted into the fineſt boulted flour, without bran or reſidue; becauſe what does not paſs through the boulter, can be returned into the ſtones, and ground over again. Such flour may be made into cakes, puddings, porridge, &c. &c.; or, as has been aſcertained by experiments with bruiſed potatoes, by having a certain proportion of wheat flour added, it may be made into the fineſt fermented loaves. Theſe experiments have only been made with bruiſed potatoes; but as, in drying by ſteam, they did not ſeem to loſe any thing but water, and the only effect was a concentration of their principles, it ſeems probable that a ſmaller proportion of wheat flour may be ſufficient to make them ferment into bread, than is neceſſary to be added to the potatoes when only bruiſed.

But I have an utter averſion to the regions of conjecture, and do not wiſh to go an inch beyond the limits of aſcertained facts.

In my many peregrinations through the Highlands and Iſles, I have often been forced to lament, that our Highland Society did not know more of the country they undertook to improve. With them, the cry was improve! improve! without conſidering whether their improvements were either expedient or practicable, in the exiſting ſituation of the country. In place of improvements, they ſhould, in my humble opinion, have begun with acquiring an exact knowledge of ſoils; the means which nature has provided for their fertilization; the actual ſtate of agriculture; and the manners and diſpoſitions of the people in the extenſive diſtrict they undertook to improve. Such knowledge cannot be expected from a native of the Highlands, but muſt be derived from ſtrangers, who have an eye to diſcriminate, and a judgment to appreciate. Had ſuch knowledge of the Highlands and

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Iſles, their exiſting ſtate, and natural reſources, been laid before the public, it would have been eaſy to ſuggeſt improvements that were not only expedient but practicable.

I ſhall only adduce the premiums iſſued for raiſing potatoes, in the lazy-bed way, on moor or moſs, as an inſtance how far the exertions of the Society have been miſapplied.

The Society, having laid down no rules, or plan, by which the work ſhould be conducted, each perſon contending for their premiums, proceeded, as whim or conveniency prompted him, to mangle and abuſe; and they have actually rendered unfit for ſubſequent cultivation, conſiderable tracts both of moſs and moor, on the mainland and iſlands. Inſtead of running ditches, to take off the water, they piled up their lazy-beds, ſo as to raiſe them above the water; and formed them in ſuch croſs and whimſical directions, that the land cannot now be cultivated, without undoing all they have done, and expending much more than it is worth. It was in vain that I remonſtrated with many of them; pointed out the lines in which they ought to have run drains, before they broke the ſoil; and ſhowed how they ought to have formed their beds in ſtraight parallel lines, ſo as to render the land capable of future aration. I alſo tried to convince them of the abſurdity of piling up ſuch high mounds of earth, where they had only a few miſerable tufts of potatoes on the top of the mound, while the intermediate ſpaces were filled with water, like canals. It was in vain, too, I repreſented the benefit that would reſult from laying ſhell-ſand upon their lazy-beds, which was often contiguous to them, and equal, in the proportion of its calcareous matter, to the beſt lime. 'The Society had ſaid nothing about theſe matters,' was a *tickler*, a *knock-'em down*, which rendered all my arguments ineffectual. This ſhews, that when people are in the humour of travelling with a bandage about their eyes, they may happen to do harm, even with the beſt intentions.

The potato delights in a looſe, friable, though dry ſoil, and in a moiſt climate. From the iſland of Arran to the Orkneys, including the Hebrides, this root, with a few exceptions where the ſoil is unfavourable, attains a degree of perfection ſeldom equalled in other places. In this extenſive tract, the modes of culture are very various; and the beſt may eaſily admit of improvement. But here potatoes are ſeldom an exchangeable commodity, becauſe they are not within the reach of markets. Every family endeavours to raiſe as many as will ſupply its own conſumption, and no more. But were the practice of drying them on ſteam-kilns, in the way I have deſcribed, introduced; as the quantity that may be raiſed in theſe regions is unlimited,

ſo

ſo they might export vaſt quantities of nutritious vegetable food, for the ſupply of our cities, our navies, and the Weſt India market. It does not ſeem neceſſary to grind the potatoes into meal in theſe regions, as they can be ground where they are to be uſed; and, from my experiments, it appeared that the dried bits kept fully as well as the meal.

The quantities of driſted ſea-weeds (*fuci*) in theſe regions, is immenſe; but at preſent they are only collected and applied at the time of ploughing and ſowing. I have ſeen ſuch quantities blown on ſhore during ſummer, that their putrefaction on the beach infected the air, to a great diſtance, with peſtilential vapours. Were the people inſured in a certain vent for their produce, they would ſee the propriety of forming them into compoſts with moſs, which compoſt would be applicable to every ſoil but moſs; or they might compoſt them with earth or clay marl, which abounds in many places, which would make an excellent dreſſing for moſs, or any ſoil. As ſhell-ſand and limeſtone abound in theſe countries, they may either be applied directly to the ſoil, or mixed in the compoſts. When the interior country is laid open by thoſe roads which are forming by the aid of Government, excellent ſhell marl will be found in many lakes and ſwamps, which may be applied to the improvement of land. There compoſts may be made with the dung of cattle; and compoſts, when judiciouſly made and applied, always produce potatoes of a better quality than the putreſcent manure, when applied by itſelf.

The potato is an excellent plant for bringing moſs, or moors of a friable ſoil, into cultivation; and the firſt crop generally pays all the expence, with profit. As it thrives ſo well in theſe countries, I have no objection that the extenſion of its culture ſhould be ſtimulated by premiums from the Highland Society, provided they be ſo conducted as not to ſet on the people to mangle and abuſe the land, and render it good for nothing afterwards. But I ſee no utility in forcing the production of potatoes, in countries where they are not convertible into money; and where they can only be conſumed by the people who raiſe them. Were their weight and bulk reduced, and their ſubſtance rendered capable of being preſerved any length of time, by ſteam kilns, their production might be ſtimulated by premiums, or otherwiſe, to an unlimited extent.

Were it not to encroach too much upon your time, I could ſuggeſt a plan of a ſteam-kiln of this ſort, covered with thin ſheet iron, which would effect the objects here deſcribed, with the ſmalleſt poſſible expenditure of fuel. I am confident ſuch kilns would conſume much leſs fuel than the common fire-kilns;

and

and that they might be advantageouſly uſed, not only to dry potatoes, but pale malt, and every ſpecies of grain.

I am, &c.

May 14th, 1804. PROJECTOR.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Reply to the Letter of A. G. on the Subject of Thraſhing Machines.

SIR,

As you ſeem to think that ſome notice ſhould be taken of the letter ſigned A. G., inſerted p. 302, laſt Number, I ſhall, without ceremony, preſent a few remarks thereupon. The thraſhing machine is undoubtedly the moſt important implement poſſeſſed by the corn huſbandman; conſequently a few minutes of a rainy harveſt day cannot be better employed than in examining what is ſaid by Mr A. G. concerning the invention.

In my two former letters, Vol. IV. p. 128 and 499, I commented upon Mr A. G.'s communication, Vol. III. p. 428, and gave a conciſe hiſtory of the thraſhing machine, which is not controverted by him in any material particular. He appears, however, to view the hiſtory as incomplete, becauſe it is chiefly reſtricted to an account of the endeavours uſed by Mr Meikle to bring it to perfection. Now, allow me to ſay, that as almoſt every thraſhing machine in uſe, ſo far as my knowledge reaches, is conſtructed agreeably to the principles of the one originally deviſed by Mr Meikle, I humbly preſume that a detail of the meaſures uſed by him muſt be held by every impartial perſon as conveying a ſatisfactory hiſtory of the invention. I mentioned Mr Meikle's firſt attempt to thraſh by a number of flails, which confeſſedly was unſucceſsful. I pointed out the cauſes which led him to think that thraſhing might be accompliſhed by fixing ſtrong beaters on a large cylinder or drum, inſtead of having looſe and naked ſkutchers, as had been attempted by others; and deſcribed the ſcene or place where the operation was originally executed, and carried ſucceſsfully into effect. If I am right in theſe things, and the contrary is not directly maintained by your correſpondent, I would gravely aſk him, what he wants to be at? Does he want a hiſtory of the conſtruction and erection of every individual machine now uſed in Britain? If he does, then to be ſure my account muſt be viewed as defective; for a book bigger even than Rapin's Hiſtory would not be of ſufficient ſize to contain one half of what, under this circumſtance, would

would be required. But pray what has the conſtruction and erection either of his machine or mine to do with the hiſtory of the invention? Machines may differ in ſize, may have long or ſhort cylinders, ſmall or large wheels and pinions, be worked by one horſe or ſix, by wind or by water, be furniſhed with the appendages of rakes or ſhakers, and with one or even two pair of fanners, or with none at all; ſtill, after all, notwithſtanding theſe differences in ſhape and ſize, the original principle may be retained. The old Northumberland machine which I mentioned, is altogether laid aſide. Mr Stirling's, in Perthſhire, may be preſerved, for all that I know; but no perſon can with truth make ſo much as a compariſon betwixt it and the one afterwards invented by Mr Meikle. That Mr Meikle invented the firſt machine which could be profitably uſed, is unqueſtionably true. I admit that Mr Ilderton, Mr Oxley and Mr Stirling, had previouſly made attempts to conſtruct machines, and am ſincerely diſpoſed to beſtow every manner of praiſe upon their laudable endeavours, though I cannot allow them to have ſucceeded. I well remember the ſtate of the public mind when Mr Meikle's invention was advertiſed in 1788, by his friend Mr Walter Roſs. In fact, many people viewed the whole as a fiction, while others conſidered it as a well-meant endeavour, that could not be realiſed; and I muſt place myſelf among this claſs, having long remained ſceptical concerning the promiſed advantages. Here I may clear up a miſtake fallen into by Mr A. G. I am not a practical mechanic, and know little of theory either. I am what my ſignature ſpeaks me to be; and any little knowledge which I have about thraſhing machines has been gathered by ſedulouſly attending to their operations.

As you have already elucidated what took place betwixt Mr Meikle and Mr Raſtrick, it is unneceſſary for me to ſay one word upon that ſubject; except that, in making ſuch looſe and unfounded allegations, even though borrowed from a printed work, your correſpondent did not add much to his own reputation. Something of the like nature may be ſaid reſpecting that part of his communication, wherein he declares, that I have taken the trouble of inventing a machine for him. To what part of my letters this relates, I am at a loſs to diſcover; for every paſſage, quoted as his, ſeems to be correctly given. I ſaid, in my firſt letter, that his *data* were inſufficient to calculate the effects of any machine; and proved by figures, the accuracy of which I preſume he will not call in queſtion, that his ſecond machine behoved to thraſh a leſs quantity than the one firſt conſtructed, becauſe it was endowed with leſs velocity. In my ſecond letter, I animadverted upon an improvement ſuggeſted by him, which

I conſidered to be of little utility; and maintained that no benefit could be derived from knowing the dimenſions of wheels and pinions, unleſs the velocity of the moving power was alſo explained. In doing theſe things, I *invented* no machine for him; I merely reaſoned upon the particulars furniſhed reſpecting thoſe he had conſtructed and erected; and whether I reaſoned correctly or not, cannot be aſcertained from the letter now before me. In a vague way, he ſays, that a mill built by theory may fall ſhort of expectation when put into practice; the truth of which, as a general poſition, I readily allow. Nay more, it would not be difficult to bring proofs of its rectitude, even from the account given by your correſpondent of his own undertakings.

With regard to the comparative utility of ſmall and large machines, I believe there can be but one opinion among thoſe who are diſpoſed to inveſtigate the buſineſs with preciſion. Perhaps ſmall machines, in certain caſes, may be uſed with ſome degree of ſucceſs, particularly if barley and oats are only cultivated, or where the ſtraw is ſhort and ſoft; but as ſhakers and fanners cannot be annexed to them, at leaſt when worked by one horſe, I muſt abide by the opinion formerly given, reſpecting their general inutility. I put it to your correſpondent, whether he thinks the grain raiſed upon a large corn farm could be thraſhed cheapeſt with one machine worked by ſix horſes, or with ſix ſmall machines each worked by one horſe, and requiring the number of hands he deſcribes. This queſtion brings the buſineſs into narrow bounds, and, if anſwered in favour of the large machine, as I preſume muſt be the caſe, ſettles the diſpute. In fact, with large machines, corn is thraſhed and cleaned at very little more expence than is incurred by the cleaning proceſs when ſmall machines are employed; and granting, for argument's ſake, that in both caſes it is equally well thraſhed, ſtill the ſaving in ſhaking and cleaning is an object of conſiderable magnitude.

I do not think I was wide of the mark when I ſtated, that one boll of grain per horſe per hour might be taken as a fair average of work performed by thraſhing machines. That more may be done with ſhort oats in every ſeaſon, and with all grains in particular ſeaſons, I readily admit; but, taking ſeaſons as they generally happen, and grain according to the proportions uſually raiſed over the kingdom, I muſt maintain that my calculation was tolerably accurate, if regular journies or yokings, not detached hours, are to be eſtimated. But, allowing I was wrong, what benefit does your correſpondent's argument get thereby? If more is thraſhed per horſe per hour than I calculated, the advantage is reciprocal. I grant it would affect my argument in ſo far as it applied

applied to flail work; but this is a branch of the ſubject which he has not noticed.

I am at a loſs to aſcertain the benefit that can be gained from knowing that Mr William Tunſtal has erected a mill which, in ſix hours, with one horſe, thraſhed fifty buſhels of wheat, or that the late Mr Palmer of Matſtock invented a mill which was much approved of. I ſhould be glad to know, whether theſe machines were conſtructed upon different principles from thoſe in common uſe; if not, the word *invented* is moſt improperly uſed. I ſhould alſo be glad to learn what was the length of Mr Tunſtal's ſtraw; for if it was cut by the middle, as is cuſtomary in many Engliſh counties, one third more grain might be thraſhed in a given time than is practicable in this country. In a word, the quantity thraſhed by any machine depends ſo much upon the nature of the ſeaſon, the climate of the diſtrict, the length of ſtraw, and the quality of grain, that no juſt inference can be drawn from any ſtatement which is not fully and diſtinctly circumſtantiated. I am yours, &c.

September 1804. ARATOR.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Culture and Uſe of Ruta Baga, or Swediſh Turnip.

SIR,

I OBSERVED, in your laſt Number, a paper 'On the Quality and Uſe of the Swediſh Turnip or Ruta Baga,' and expreſſing much doubt if it is yet ſo well known as to be conſidered as a crop advantageous to the farmer, under the hazardous circumſtances which attend its cultivation.

This has induced me, as a practical farmer, though much engaged in other occupations, to beſtow an hour in giving you a ſhort account of my experience of this ſpecies of turnip. About eleven years ago, ſoon after I knew of the ruta baga being raiſed in Britain, I purchaſed an ounce of the ſeed for one ſhilling, which was ſown in my garden. I found it ſtood the winter, unaffected by the froſt, and allowed ſome ſtocks to ſtand for ſeed. In 1794, I had ſome drills thereof in the field, and from them tranſplanted a conſiderable number of the beſt ſtocks in a kail-yard, upon two or three falls of well prepared land. They were generally from 5 to 7 lib. weight. The winter was uncommonly ſevere, and the ſpring ſtill more ſo, a cloſe froſt having continued above twelve weeks.

It happened (as I thought unfortunately) that a few of my ſheep

got into the yard, and ſeveral of the turnip were bitten by them. I ſuppoſed theſe would have been immediately deſtroyed by the froſt. It was not ſo. They brought ſeed; and I had a large quantity fuller and better than any turnip ſeed I had ſeen of any kind. I gave away ſome, ſold 20 lib. weight to my ſeedſman at Dumfries, and kept what ſerved me for two or three years. I found it might be raiſed with more certainty than any other ſeed, the root not being affected by the froſt, which is often ſo deſtructive to other turnip kept for ſeed; and, the ſeed ripening later, it was not ſo ſubject to the depredation of ſmall birds, who ſeize ſo greedily upon all early ſeeds.

From the year 1796, I had above one acre in the field, and, for the laſt four or five years, have had from two to four acres. I had them ſown in the common way, with the drill plough, and the land prepared and managed in all reſpects as for other turnip, excepting that the ſeed was earlier ſown. I found it neceſſary, for bringing them to the beſt ſize, that they ſhould be in the ground the laſt week of May or firſt week of June, as I live in an inland part of the country, about fourteen miles from the ſea. In a lower climate they might be ſown later, but in a higher climate they ought to be earlier. Having heard, ſeveral years ſince, that they might be raiſed of greater ſize, and more certainly, by tranſplanting, like cabbage, from the ſeed-bed, I tried it, as I thought, fairly. They did not even grow ſo regularly large; they were attended with more labour; and I ſaw that, in a dry ſeaſon, they might be kept too far back, and allowed to grow too large in the ſeed-bed before a ſeaſonable time was got for tranſplanting.

I notice, in the paper I have mentioned, that one of the great objections to this turnip is, the plants running to ſeed. I have never found that fault. So far as I recollect, not one turnip in an acre has run to ſeed with me. At all events, I am ſure that more have not done ſo than of common turnip, otherwiſe that I would have obſerved it. Whether this has been owing to the time or manner of ſowing being different, or their being different kinds of ſeed, I will not venture to ſay. The latter, I think, is moſt probable, as I have heard no perſon make the complaint who uſes the ſame kind of ſeed that I have done.

I notice alſo a doubt expreſſed as to the quantities grown of this turnip having increaſed for ſome years paſt. This may be the caſe in ſome counties or diſtricts. So far as I have occaſion to obſerve, it has certainly gained ground, and is ſown to a greater extent than was the caſe a few years ago; and I have reaſon to think the practice has increaſed very conſiderably further ſouth. Different perſons from Cheſhire, Nottingham, &c. have told me ſo. In the London Chronicle, I obſerved laſt autumn an agricultural report,

report, where it was ſtated, that a certain diſtrict in the ſouth, ſix years before, had only eight acres of Swediſh turnip, and laſt year, in the ſame diſtrict, there were growing four hundred acres.

From my experience and ideas of the utility and ſuperior qualities of this plant, I ſhould indeed be ſorry if its culture is not extended yet much beyond what it has been. At the ſame time, I do not think it ought to encroach, in a great degree, upon the growth of common turnip, which has been found, with all its effects and conſequences, to increaſe the food of man more than any other ſpecies of plant I have known or heard of. That it requires all the ingenuity and management of which the farmer is capable, and all the wiſdom and foreſight of the Legiſlature, to ſecure food for the increaſing population of the country, we have much experience of; owing, in a great meaſure, to our variable climate. It is equally obſervable, and felt by farmers, and often by people of all ranks, that our former valuable turnip is not proof againſt the changes of the weather, and the ſevere froſts we ſometimes have in the ſpring; and that a great deficiency ariſes, from the failure of turnip, of food for cattle required for the uſe of the market. This is no doubt a ſerious evil, which evil is alſo felt by the farmer, in the want of food for cattle propoſed to be fatted early on graſs, and for younger cattle which he wiſhes to diſpoſe of. Every farmer, experienced in the uſe of turnip, knows the effect that even ſmall quantities in the ſpring, given to cattle or ſheep, have upon them, when firſt laid upon graſs. They immediately commence to acquire fleſh and bone. The want of ſuch green food hardens or contracts the fibres; and theſe require a conſiderable time to relax them, before growth of any kind begins.

Spring food for ſtock of all kinds kept upon cultivated farms, has been conſidered, ſince I firſt remember, as the greateſt want that farmers had to encounter, and the want which there was leaſt proſpect of getting ſupplied. No article, in my knowledge, has appeared to anſwer the purpoſe ſo well as the one under conſideration. If it does ſo, there are few farmers of experience but will allow that it is an invaluable acquiſition to the country.

In my uſe of Swediſh turnips, I reſerve them till the ſpring, generally the 1ſt of March. I then give them in ſome proportion to all my cattle, to which other turnip had been given in the winter. To fatting cattle, the largeſt proportion; and to young cattle, in ſmaller quantities.

In ſpring 1803 (my crop of potatoes having been very ſhort in 1802), I gave ten horſes Swediſh turnips for ſupper for about ſix weeks. They were equally fond of them as they are of po-

tatoes, and anſwered as good a purpoſe in all reſpects. They were clean waſhed, and broke a little in a tub with a ſharp ſpade, ſo as the horſes teeth might readily get hold of them. This laſt ſpring, being ſomewhat afraid of a ſcarcity of fodder, particularly for a number of cattle which had got a few common turnips through winter, I determined, about the 1ſt of March, to try my Swediſh turnip, and to uſe them with economy, ſo as to ſecure a ſupply of food till the graſs ſeaſon arrived. For this purpoſe, I took up thoſe which grew upon a fall of land, and having weighed the produce, I arranged the quantity to be given daily to the whole of my cattle and ſheep. In this way, I had a ſuitable ſupply, till the whole was either ſold or laid upon graſs. I had three acres in all, the produce of which amounted to 14,400 ſtone weight. I need hardly ſay what would have been my difficulty, ſituated as I was with a large ſtock of cattle in hand, had I not been provided with a ſuitable quantity of this beneficial article. In fact, a few acres at that critical period of the year inſures an advantage to the ſtock farmer, not to be obtained by the culture of any other variety of ſpring food.

Here, however, I have to relate, that, for the firſt time, I found, this ſpring, ſeveral of the turnip failed, occaſioned probably by the uncommon variableneſs of the weather. Some part of the ground was of a loamy ſoil, and there the failure was greateſt, though it took place alſo partially upon what was of a gravelly nature. This firſt failure, though it did not ſeem to exceed one hundredth part of the crop, is a ſevere diſappointment. I can aſſure you, however, that I have formerly had them half, or more, eaten by ſheep; while the remaining parts continued good and firm for ſeveral weeks after, and were not, in that ſtate, injured by froſt. If the failure of a few of them this year ariſes from our climate having altered the nature of the plant, the ſame ſeed having been continued and grown for ten or twelve years, this may be corrected, by getting a freſh ſupply from Sweden; and if that is found to anſwer the purpoſe (like a renewal of Poliſh or Frieſland oats), we need be at no loſs to have the root in its perfection.

I have only to add, that I remain,

Sir,

Your moſt humble ſervant,

——M——T.

Dumfrieſſhire, 9th July 1804.

TO

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Propriety of Bruiſing Oats with a Machine, for ſuch Horſes as do not Grind them ſufficiently with their Teeth.

SIR,

HAVING ſome time ago heard the above ſubject diſcuſſed in a ſociety of reſpectable farmers, I was rather ſurpriſed to find much difference of opinion, on a queſtion which might have been ſo eaſily decided by experiment.

It was contended by ſome, that oats vegetated on a dunghill, after paſſing whole through the ſtomach of a horſe. And, on the other hand, it was ſtated, that although whole oats were to be found in horſe-dung, they had parted with their farinaceous and nutritive properties in their paſſage through the horſe, and were become either empty huſks, or contained only an inſignificant portion of mucilage, without any power of vegetation; and that the oats growing on dunghills were ſuch as had fallen from the horſes' mouths while feeding.

I beg leave to ſtate, that I accidentally noticed a large quantity of whole oats in ſome dung juſt paſſed from a horſe, and, upon examining them, they appeared to be quite ſound: I thereupon had the dung mixed with mould in a garden-pot, and, in about a fortnight, the oats began to vegetate very freely, and are at this time two or three inches above ground.

It is not convenient to me to follow up this experiment, and I therefore confine my ſtatement to ſaying, that *oats have vegetated after paſſing through one of my horſes.*

This fact muſt have been repeatedly aſcertained; but as it is by no means generally received, you may think it worth while to take further notice of it; and ſince it is connected with very important conſiderations in the branch of agriculture relative to feeding, it cannot be too frequently impreſſed on your readers.

From the above, I am induced to ſuggeſt the utility of bruiſing all grain that is to be given to horſes, ſo as the full benefit of the nutritive matter therein contained may be procured. I am, yours, &c. *T. N. P.*

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Thoughts on the Quantity of Grain required to Seed a Scotch Acre of Land.

SIR,

ENCOURAGED by the favourable reception of my former letters under different ſignatures, I again venture to addreſs you,

reſpecting the quantity of grain required to ſeed a Scotch acre of land, which I truſt will be thought deſerving a place in your Magazine.

It is obvious, that, in order to render our lands as productive as poſſible, due attention ſhould be paid to every part of the farming proceſs, from the breaking up of the ground by the plough, to the carrying of the crop to market. No doubt, ſome parts of the farmer's diverſified labours deſerve more accurate attention than others; but it ſhould be a maxim with every one, 'that whatever he does, he ſhould endeavour to do it well.'

Very little obſervation may ſerve to convince one, that many errors are committed by farmers, with regard both to the quantity, and to the equal diſtribution of the precious ſeed. To judge by the practice of ſome people, one would be led to ſuſpect, that they thought nothing elſe neceſſary for enſuring a good crop, than to ſow liberally; while others again, by the careleſs manner in which they diſtribute the ſeed, we would be ready to conclude, that they thought preparing the ground for its reception all that was neceſſary. I remember that, not many years ago, a certain extenſive farmer, and he not low in the liſt of fame, maintained, that five firlots of oats were no more than ſufficient to ſow a Scots acre, and he uſed to condemn the practice of ſuch as ſowed a ſmaller quantity. A boll, nay even five firlots of wheat, is ſtill ſown by ſome upon the acre; ſix or ſeven firlots of peas and beans; and almoſt a boll of barley. Now, Mr Conductor, I am clearly of opinion, that ſuch enormous loads of ſeed, inſtead of contributing to an abundant crop, muſt tend to diminiſh it. No doubt, regard ſhould be paid to the nature of the ſoil and climate: Some ſoils and ſituations requiring thicker ſowing than others; but, in general, I will ſay, and I ſpeak from long practice, that a much leſs quantity than what is uſually ſown is ſufficient for ſeeding the ground. When land is kept in good order, by proper tillage, and a judicious rotation, and when due attention is paid to diſtribute the ſeed equally, I will venture to recommend the following quantities of each grain upon the Scots acre, taking it for granted that the ſeed is freſh and well dreſſed, and that the climate is ſuch as we enjoy in the middle diſtrict of Eaſt Lothian.

Firſt, then, with regard to wheat, if ſown when the land is ſufficiently dry, and before the middle of October, I would recommend three firlots per acre, as a good average quantity—I ſay average quantity; for in this the farmer muſt be guided by his own judgement, in regulating the quantity by the ſeaſon he ſows in. If he is diſpoſed to ſow his fallows ſo early as from the middle to the end of September, ten pecks will be found

fully

fully ſufficient for an acre; but if he defers ſowing till the middle of the following month, three firlots will not be too much. Wheat after peas or beans, if the land is clean and ſufficiently dry, will not require to be thicker ſown than on fallow; but if ſown later than the middle of October, more ſeed ſhould be given, as the riſk of ſome of it periſhing is greater after that time. If wheat is not ſown before the ſpring, a greater quantity of ſeed may be neceſſary, as thick ſowing haſtens the progreſs of the crop to maturity; and I ſhould not think fourteen pecks more than enough, if ſown at that ſeaſon. 2*dly*, With regard to barley, I would recommend ten pecks per acre on dunged and well fallowed land, and eleven pecks, or three firlots, on land that had been peas or beans the preceding year. 3*dly*, As to the quantity of oats per acre, perhaps I may be thought rather deviating from the ſure road of experience, when I venture to recommend a ſmaller quantity than one boll per acre; but from my own practice on ſuch lands as are not deemed fitteſt for thin ſowing, being moſtly thin clay on a cold bottom, interſperſed with ſpots of loam on a rocky bottom, I have frequently ſown at the rate of three firlots per acre, without having reaſon to complain of want of ſucceſs: however, in this as in every other caſe, the practical farmer muſt exerciſe his own judgement to determine the proper quantity, by the ſtate of the ground in the time of ſowing. For there is not the leaſt doubt, that conſiderably leſs ſeed will ſuffice in a favourable, than in a backward, wet, and untoward ſeaſon. In general, however, I have no heſitation in aſſerting, that, in an ordinary ſeed-time, fourteen pecks of oats are perfectly ſufficient for an acre. Of the kind called potato oats, I reckon ten pecks a large enough quantity. Having had little experience in the ſowing of the other early kinds of oats, I ſhall be ſilent concerning them. But let me again obſerve, that great care ſhould be taken to cover the ground as equally with the ſeed as poſſible; for if done in a ſlovenly and careleſs manner, it muſt be evident, that no given rules as to quantity can be of any uſe. And here allow me to notice the folly and vanity of ſome people, who pique themſelves on being thought great ſowers, and will tell you with great ſelf-approbation, of their having ſown ſuch and ſuch quantities in a given time; never recollecting, that, however ſtrong a proof ſuch feats may be of their bodily powers, they for the moſt part betray a proportional want of judgement in the diſtribution of the ſeed; and, inſtead of being gainers by ſuch violent exertions, they very often throw away as many firlots of corn as they ſow acres, beſides injuring the future crop. It will be needleſs to point out what a ſaving to the nation, as well as to individuals, three or four pecks per acre

acre would be; and, in many cases, I have not the smallest doubt such savings might be made with the greatest propriety. But, in order to attain this end, let all attempts to astonish the world by great feats in sowing be for ever debarred, and let the attention of the farmer be directed to disseminate the grain with the greatest possible exactness; and, for this purpose, let him not disdain to set an example (if capable) to his servants himself; and thus, by going along with them in this pleasant part of his operations, and frequently casting his eye over their performances, he will not fail, in some degree, to prevent that slovenly method of sowing which some people have, the effects of which has often met my eye, when I have had occasion to view their fields after seed-time. I have deferred mentioning peas and beans to the last, as they are seldom sown to advantage in the broadcast way, and should therefore, always when practicable, be sown in drills, and horse and hand-hoed between the rows. Some instances may occur, of good crops of both peas and beans, and even the land left in good order after them, in the broadcast way; but I believe I may venture to say, that three times out of four they leave the land in bad order for a following crop, which is certainly a good reason for preferring the drilled husbandry with respect to them. As to the quantity proper to be sown on an acre, the general practice is, in my opinion, to sow them too thick in the row; no less than six firlots being by most farmers thought necessary. As far as my experience goes, I would prefer a smaller quantity, and would not be afraid of my crop turning out deficient for want of seed, if at least a firlot was kept back from every acre. I cannot say, that I have ever made any experiment of the produce from different rates of sowing; but, so far as I am capable of judging, from inspection of the growing crops at the different rates above mentioned, I do not think I am deciding rashly, when I give the preference to the rates I have recommended. I have sometimes thought that a machine might be devised for sowing corn more equally, than it is perhaps possible, especially in windy weather, to do by the hand; and, at the same time, to deposit it at a due depth in the ground, quite out of the reach of pigeons, birds, &c.; but as I have no mechanical turn, I only suggest the hint.

Perhaps, not a small number of your readers may think the rates of sowing recommended in this letter are rather below the golden *medium*. To such I can only say, that what I have written is the result of my own experience; and, however defective it may appear in point of valuable information, I flatter myself you will not think it inconsistent with the nature of your widely diffused Publication. Wishing you and your readers all good things, I am, &c. ARATOR, junior.

TO

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Nature, Improvement, and Qualities of different Soils proper for Rearing Sheep.

LETTER II.

SIR,

REFERRING you to my former letter, vol. IV. p. 300, I ſhall now proceed to ſpeak of thoſe kinds of herbs, the effects whereof on the conſtitution of ſheep are ſomewhat ſimilar to thoſe of heath, and which are often found on the ſame ſoil with it. The principal ones are *bent*, *ling*, and *deer-hair*. Theſe are the names by which they are known in this neighbourhood; but I ſuſpect they are only provincial ones, and that the ſame plants or herbs may be known by different names in different diſtricts; therefore, in order to prevent miſtakes, I ſhall endeavour to give a ſhort deſcription of each as I proceed.

Bent may be divided into three kinds. The moſt valuable is that called *ſtool-bent*, whoſe root forms a kind of cylindrical cluſter, partly above and partly below the ſurface of the ground, about one inch in length, and a quarter of an inch in diameter. From this root ſpring a number of ſmall green leaves, which ſpread from the centre in an oblique direction; and, in the months of June and July, a ſmall round ſtalk ariſes from the root, in the middle of the leaves, extending to about a foot in height, which bloſſoms in July, ſeeds in Auguſt, and decays in September. This ſpecies is not confined to any particular ſoil; for though it is found, in greateſt abundance, on dry brittle moſs, with a ſmall mixture of ſand, yet it is alſo obſerved on clays and gravels; rarely, however, on the latter, as the porouſneſs of the ſurface is unfavourable to its growth.

This kind of bent may juſtly be reckoned among the moſt valuable plants which a moſſy ſoil produces, being a ready and healthy ſpecies of food at almoſt all ſeaſons; for even in January, February, and March, when moſt herbs have ſuffered greatly from the ſeverity of the ſeaſon, it loſes little of its verdure, and conſequently affords a ſupply of green food at a time when it is otherwiſe very ſcarce. It hath alſo this advantage over heath, that the ſheep bred thereon feed to a greater weight, and carry more wool than thoſe reared upon the former, and are not ſo apt to turn lean in April, that critical period of the year. I cannot, however, omit noticing, that, after the beginning of April, the ewe generally gives the preference to herbage of a more juicy and nutritive nature, as being neceſſary to bring and keep upon her a ſufficiency of milk to ſupport the lamb. To obtain this end ſhe ſpares no pains; but wanders about and inveſtigates

veſtigates every corner of the lands to which ſhe has acceſs, often at the hazard of her life. This inſtinctive, nice, diſcriminating power of the ewe, in ſeeking after ſuch food as is beſt adapted to her preſent ſituation, exhibits a ſtriking proof of that care and attention which is exerciſed by Nature over all her works.

Reflecting on the hardy nature of this plant, which is ſeldom injured by winter froſt, I am inclined to think it may be propagated on land not previouſly prepared by tillage. On this point, indeed, I ſpeak not from experience, but only hazard an opinion. It certainly, however, merits a trial; and, if found to anſwer, would be a great acquiſition to the Highland farmer; as it is well known, that in high-lying grounds, expoſed to the north and eaſt winds, the graſs is but thin and naughty, even in ſummer, and for the moſt part unfit for paſture in winter; whereas this ſpecies of bent not only yields more food in ſummer than any kind of graſs that will grow in ſuch ſituations, but is infinitely ſuperior during the winter and ſpring months. The latter end of March or beginning of April may be conſidered as the moſt proper ſowing ſeaſon, provided the weather is wet; as the ſeeds, being carried down by the rains to the roots of the fog or moſs, would thereby be ſecured, in ſome degree, from the effects of future drought, and might be expected to vegetate in ſafety. I will not pretend to put this plant in competition with the more ſucculent and nutritive graſſes, which are now generally cultivated on all ſheep farms, where the ſoil and climate allow; yet its great utility as green food in the ſpring months, might perhaps warrant a partial propagation of it, even in the moſt favoured ſituations.

The next ſpecies I ſhall take notice of is called *white bent*. Perhaps it has acquired this name from having always a white and withered appearance at top, even when it is green, and ſpringing at bottom. The root, which is generally long, ſends out a vaſt number of ſmall ſtalks, about a foot long, and not much thicker than horſe hair. This kind of bent ſeems to thrive beſt on the ſoils already noticed, as moſt adapted to the production of *ſtool-bent*; but its value for paſturage is far inferior to that of the laſt mentioned plant. Indeed, it yields ſo little food, that ſheep ſeldom paſture upon it unleſs it hath been recently burnt, or in time of ſnow, or during ſpring, when the want of a ſufficiency of other food compels them to ſeek diligently into its roots.

The laſt ſpecies of bent is uſually called flying bent, from its light, floating nature, and the conſequent eaſe with which it is driven by the wind. It ſprings in May, and is fit for paſturage

turage from that time to near the latter end of Auguſt, after which it is good for nothing. Though not quite ſo common as the two other kinds, yet it is to be found in ſome places, in conſiderable quantities. It delights moſt in a ſoil compoſed of moſs and earth, incumbent on a firm bottom of earth and gravel, and is obſerved to abound more in low than high grounds. Like white bent, it cannot be too often burnt; for if this practice is neglected only for a few years, the accumulated produce of theſe ſeaſons renders the ſoil ſo coarſe and unproductive, that ſheep ſeldom paſture upon it; and, what they do get, affords but little nouriſhment. Some ſoils are conſiderably benefited, by graſs and weeds being allowed to rot upon them; but this does not ſeem to be the caſe with moſſy ones; for it is found from experience, that the more old graſs or other decayed vegetables there is upon the ſurface, ſo much the worſe is the produce of that ſeaſon.

Ling, which I am next to conſider, is excluſively the production of moſs ſoils, eſpecially ſuch as are flat, wet and deep. It produces ſmall ſtalks, with black oval heads, known here by the name of *moſs-crop*. Theſe ſtalks, being among the firſt vernal productions, are eagerly ſought after by ſheep, even to the endangering of their lives, in holes and moraſſes. In May they are covered with a white downy ſubſtance, nothing inferior to the fineſt cotton; but from and after that time ſheep are not diſpoſed to eat them. Ling is proper for food from the beginning of March to the latter end of Autumn, and even before and after theſe times, if the weather is freſh and mild; for ſo ſtrong are the vegetative powers of this plant, and ſo great is the influence of the weather upon it, that a wonderful alteration takes place in a few freſh days. In Spring, ſheep receive much nouriſhment from its roots, which they pull up and eat with great avidity, as they are then freſh and nutritive. It is excellent food for lean ſheep, being of a more coſtive nature than young graſs, yet not leſs nouriſhing; of courſe it feeds as well, and at the ſame time preſerves from the ruſh or diarrhœa, a very formidable diſeaſe, to lean hogs in particular.

There are other plants common in moraſſes, and even in wet meadow lands, where the ſoil is a little inclined to moſs, which produce ſtalks and flowers ſimilar to thoſe of ling, and are clothed with the ſame downy ſubſtance; but as they do not appear to be reliſhed by ſheep, it is unneceſſary to take farther notice of them.

Deer-hair is nearly of the ſhape and ſize of ling, and is ſometimes found in a flat deep moſs along with it, though oftener in a moſs ſoil more dry and tenacious, which it ſeems to prefer to all others. It ſprings about the middle of April, bloſſoms at the

the latter end of May, and is fit for paſture from that time to September.

There is alſo another ſpecies of graſs called *ſword-graſs*, peculiar to a moſs ſoil, and of a more nutritive nature than any of the former, but is rarely found in the ſouth of Scotland, though abounding in many parts of the Highlands. It ſprings and decays much about the ſame time as deer-hair. The root ſpreads and divides itſelf into different branches, from each of which, at certain periods, four leaves or piles generally ſpring. Theſe leaves are about five inches long and one-eighth broad, reſembling thoſe of *pry*, an evergreen peculiar to bogs. This ſimilarity, however, laſts only for about three months, after which the former become yellow and decay, while the latter retain all their native vigour. As this plant is juicy and palatable, ſheep are very fond of it, though it can be conſidered as an article of food only for the above mentioned period.

Having already noticed the modes of improvement which I conceive to be beſt adapted to each of the above mentioned plants, it remains only, upon this part of the ſubject, to make one or two general obſervations, applicable to them all.

The firſt and principal improvement, then, which I would recommend, is frequent burning. This ought to be done early in April, or rather in March, if the weather will allow; for when the operation is deferred till the ſeaſon is far advanced, the young ſtem, being conſiderably above ground, is rather ſcorched than burnt, and thereby rendered unfit for food. The advantage reſulting from this practice, to white bent, flying bent, ling, and deer-hair, may be viewed as very conſiderable; it being uniformly found that theſe plants maintain moſt ſtock the ſeaſon in which they have been burnt. With reſpect to ſtool-bent, however, it is doubtful if burning can be performed in ſuch a way as to prove beneficial. This plant being perennial, conſequently always green, is rather ſcorched than burnt, unleſs it happen to be mixed with ſuch a number of annuals as will afford a ſufficiency of combuſtible matter for bringing the proceſs to perfection.

Drainage tends greatly alſo to the improvement of ſuch paſtures as I have been treating of, as it carries off all ſuperfluous water, and prevents the food from being locked up by ice in time of froſt. Much judgment, however, is required, to know when it can be done to advantage; as, in ſome caſes, the benefit received will not prove an adequate indemnification to the expence incurred. In general it may be ſaid, that, on all ſoils abounding with heath, ſtool-bent and ling, on which there is much dependence for winter meat, the proceſs of draining is warrantable, and will certainly repay in no great number of years; but that, where deer-

dear-hair prevails, which is only fit for ſummer food, the operation is not ſo neceſſary, as a ſuperabundance of water rarely prevents acceſs to all paſtures at that ſeaſon of the year. I would recommend the drains to be made eighteen inches wide at top, and of about the ſame depth, ſloping in the ſides, ſo as to meet in an angular point at bottom; but where the ſubſoil is clay or gravel, it would be preferable to have them about a ſpade breadth wide at bottom alſo. I remain your friend and ſervant,

S. L.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Detached Thoughts on the Syſtem purſued by Mechanics in Scotland, in Proſecuting and Executing their Works of Labour.

SIR,

IT was with much pleaſure I read, in your laſt Magazine, a paper, entitled, '*Conſiderations on Regulating the Value of Labour*,' chiefly regarding mechanics in the Highlands of Scotland, which contained ſuch uſeful information and ſound argument, as muſt convince every impartial reader, that the writer was complete maſter of his ſubject; and I ſincerely hope, that he will continue to ſupply your entertaining and uſeful Magazine with the fruits of his inveſtigations, which muſt be truly valuable to the public.

From the peruſal of the above paper, I was led into a train of thinking concerning the conduct of mechanics (I allude chiefly to maſons and carpenters) in the Low Countries. I ſhall therefore beg leave to lay before the public my ſentiments on this ſubject, through the medium of your intelligent publication.

Should a country gentleman deſign to build a houſe of reſidence for himſelf, or erect a ſet of farm-offices upon any part of his property, he will probably firſt apply for a plan, and then engage with a maſon and carpenter to execute their reſpective ſhares of work, according to contract. No doubt but both theſe mechanics (though at the time they have more work from others than they can poſſibly overtake) will engage to finiſh his buſineſs by a ſtated period. Well; the eſtimates are given in, and apparently correctly made. To work they fall. At firſt, the employer ſees a number of good hands, and things go on ſwimmingly, to his great ſatisfaction. In a ſhort time, however, the picture is reverſed; hands drop off daily; till at laſt the work is almoſt at a ſtand. If the maſter carpenter or maſon is called for, the excuſe

is,

is, (with a low bow and a penitential face)—'Oh, Sir, Mr such-a-one's house wants only a week's work to finish, which will be done immediately, when my hands will come back reinforced, and your Honour will never know that they have been absent.' This is so far, however, from being the case, that by delay in finishing the work at the stated terms, there comes to be a nullity in the contract. Here is a fine piece of work.—But, before touching upon this point, let us examine the cause of delay, in thus running from one employer's business to another's, and undertaking, nay soliciting, business which they can never properly accomplish. It originates in the *auri sacra fames*, which may be literally translated *hell-fire greed*, and a total want of principle. For, in our sister kingdom, a tradesman, when applied to, will decline work, if he has more on hand than he can properly overtake. But it is seldom (I am sorry to say it) that the like fair dealing is shown by Scotish masons and carpenters, who, grasping at every job which presents itself, seldom do their work to purpose, and thus injure and displease their customers.

To recur to the breach in the contract through delay.—The estimates being brought again into play, perhaps there is a small deviation from the agreement, either in the plastering of a partition, or erecting a press, or in similar things of trifling magnitude: then the employer is told, with a grave face, that this was the cause of the delay, and that the contract, having been thus originally passed from, he can have no recourse for a penalty. Perhaps the law will hold the same language too.

Now, let us proceed to examine the work according to the estimates.—Before finally settling with the contractors, we shall suppose all is well, and properly, though not timeously, finished. The employer is still willing to pay according to estimate; but, to his vast surprise, a long account of extra items is handed to him—'Sir, I thought every thing had been minutely mentioned in the estimates: what is the meaning of this? Why, here are items for lintels to doors and windows: how the devil do you hang them without lintels?' In answer to this—'Sir, doors are doors, and windows are windows; but there is no mention of lintels in the estimate, &c. &c. But, Sir, that there may be no words betwixt us, do you call one impartial tradesman, and I will call another, and let them judge impartially betwixt us.' I need not tell the employer what probable redress he will get in doing so: that is sufficiently well known to the public in general.

If dire necessity compels the having recourse to the Sheriff-court, he will perhaps, instead of amending his *new*, bring an *old* house about his ears. For going to law is like a sheep escaping from a thicket of brambles. He may *perhaps* come off unhurt,

hurt, but is ſure to leave the beſt of his wool behind him. And though the poor ſheep is *thus* the means of clothing the men of the law, yet he may be thankful he did not alſo garniſh their tables.

Thus, Sir, have I endeavoured to point out the too common faults of our maſons and carpenters; and though there may be no proper remedy for ſuch their illicit practices, yet, as your Magazine is univerſally read by all claſſes of men, this paper may perchance meet the eyes of ſome of theſe delinquents; and if it tends, in any degree, to ſtop the torrent of ſuch abuſes, the public will be gainers; for I am of opinion with Mr Pope, that there are many,

> 'Who, ſafe from the bar, the pulpit and the throne,
> Yet are touch'd and ſham'd by ridicule alone.'

I am, Sir, your very humble ſervant,

A COUNTRY GENTLEMAN.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Letter from Sir George Stewart Mackenzie, Bart. concerning the Price of Labour.

SIR,

ALTHOUGH, in the paper of Pol-Œconomicus, there appears ſome degree of contempt, yet I could readily excuſe this in a man of abilities ſo ſuperior to mine, were it not that I am not conſcious of having laid myſelf open to have my principles attacked in the manner they are by your correſpondent. I value the opinion of a man daily engaged in the purſuits of agriculture, and who has not only diſplayed much knowledge in his profeſſion, but who ſeems alſo to have made himſelf well acquainted with the principles of political œconomy, more than the opinion of one who ſpeculates in his cloſet, without having any knowledge of active life, and the various circumſtances that overthrow the plans of the theoriſt. On this account, I am glad that, in your note to my firſt letter, you agree with me concerning the advance in the price of labour. Far from cheriſhing illiberal principles reſpecting any concern of life, I believe not even your correſpondent feels more anxiety than myſelf to ſee farmers properly and comfortably lodged, and having every poſſible convenience for carrying on the operations of agriculture. Your correſpondent has forgotten, that it was on account of the farmer I regretted the advance in the price of labour, and not that I wiſhed to deprive him of the com-

fort which the cultivators of the ſoil are well entitled to enjoy. I regretted that the demands of workmen put it out of our power to grant to tenants the accommodations they ought to have. Why am I then attacked, in common with all Highland proprietors, for illiberality towards our tenants?

Had there been ſufficient grounds for the late advance in the price of labour, I ſhould have been the laſt to grumble. In my ſecond letter, I mention the appeal of workmen to the price of proviſions, as an apology for their increaſed demands. Whatever may actually be the relation (if any) between the price of labour and the price of proviſions, it appears pretty evident, that, in the inſtances complained of, the workmen themſelves look upon the latter as regulating the price of the former. As I think abſtract ſpeculations are foreign to the purpoſe of your Magazine, I forbear ſaying any thing on this ſubject. I ſhall only ſtate, that there are two queſtions: *Has* the price of proviſions any effect on the price of labour? and, *Ought* the price of proviſions to have any effect on the price of labour? The diſcuſſion of theſe I leave to Pol-Œconomicus.

I beg leave to inform your correſpondent, that we require no light from cloſet ſpeculators, to exhibit to us 'what effect the execution of the Caledonian Canal will have in meliorating the condition of the Highlands.' Ayrſhire is at ſo great a diſtance, that we cannot ſuppoſe a political œconomiſt there, can render uſeful his ſpeculations on the condition of the North Highlands; at leaſt, unleſs he can exhibit ſome acquaintance with the nature, the manners and cuſtoms of the country, the different relations of the inhabitants to each other, and many other particulars, a complete knowledge of which are neceſſary for Pol-Œconomicus, before he can make his diſcuſſion of any importance. At all events, I hope he will addreſs it to the world, and not to Highland proprietors in particular, whom, on the whole, he does not ſeem to hold in very high eſtimation.

As to our apprehenſions, that, without ſome caution, the execution of the Caledonian Canal would raiſe the price of labour, I muſt inform your correſpondent that they were not ill-founded. Thoſe who had charge of the work ſaw the danger; and, by fixing the price of day-labour at a moderate ſum for the ſpecies of work, removed our fears; and now that grand undertaking proceeds with rapidity. I confeſs that I am now more of your opinion, that the value of labour ſhould be left to find its own level, becauſe I have begun to experience that it *will* find its level, as I ſhall preſently mention. I do not mean to follow Pol-Œconomicus through his ſtatement of the cauſes which enhance the price of labour; becauſe I never doubted, that, *where they exiſt*, the circumſtan-

ces

ces he has enumerated will raiſe the price of labour. I ſhall only ſay, that, when I laid my complaint, *none* of the cauſes he has ſtated exiſted, which, perhaps, he may believe, when he has read the following caſe, which has happened to myſelf.

I have for ſeveral years continued to employ the maſon who long worked for my father, and he was ſo good a workman that I never wiſhed to employ any other; and he was ſo far ſatisfied with the proſpects he had, that he aſked a ſmall farm, which I gave to him. Laſt year, his demands appeared to me very extravagant. He had not to complain of *inconſtancy* of employment, being obliged to work far from home in the midſt of an 'unſheltered heath,' or to labour under any of the diſadvantages pointed out ſo feelingly by your correſpondent. On the contrary, he had only to take an agreeable walk through fertile fields, and by 'the living haunts of men.' At the commencement of this ſeaſon, he told me that he could not work for me, unleſs I agreed to give him three guineas per rood; and he enforced his demand by adding, that this was the county price. I told him that it might be ſo, and that I hoped he would procure many jobs, but that I had none for him at that rate. A maſon from another county came to me, and ſaid that he would do my work for two guineas per rood. Having inquired into his character and profeſſional ſkill, I cloſed with him; and he is at this moment at work, and has obtained a variety of other jobs. Here, then, is a moſt fortunate occurrence. Our people, ſeeing that a competition is created againſt them by ſtrangers, will, I hope, return to their ſenſes; and the price of labour come to a proper level. Is it illiberal policy in me, or any perſon, to employ a man who will work one third cheaper than another? Would your learned correſpondent, for the ſake of enforcing his maxims, give three guineas for what might be obtained for two! Pol-Œconomicus would make you believe, that I confounded a combination of the workmen and a competition of the maſters, and crows moſt luſtily at this important diſcovery. The fact is this: The workmen did poſitively ſettle that they would demand an increaſe of wages, and the maſters had no ſpirit to compete with each other, but quietly acquieſced in the demands of the men, and increaſed their own demands on their employers. There was no ſuch thing as a competition among the maſters, nor did there exiſt 'a natural combination not to raiſe the wages.' I rather imagine that the maſters are indifferent about it, or would be glad of the plea of an increaſe of wages, in order to raiſe their rates, which they generally do in an increaſing proportion, as wages riſe, and, of courſe, derive larger profits when wages are high, than when they are low.

From what I have ſtated, I believe the 'agreement of country gentlemen among themſelves to counteract the extravagant demands of workmen,' will not appear to have had any bad effects, except ſubjecting ſome of our countrymen to pretty ſevere puniſhment, by preferring ſtrangers to them. Happy would we be in employing our own people while they continued to be reaſonable; but we ſhall never encourage extravagance and impoſition. We ſhall never, by encouraging theſe, deprive the lower ranks from having their little jobs executed at a moderate price.

Should Pol-Œconomicus favour us with any future diſcuſſion on the value of labour, I hope he will not overlook what I mention in my ſecond letter, the appeal of the workmen to the price of proviſions, as the ſtandard by which they regulate the value of their labour.

I may conclude by thanking your correſpondent for having taken up the ſubject I have ſtarted, and for treating me, on the whole, with temper and moderation, although it appears difficult to reſiſt occaſionally taking a hit in the dark, eſpecially when a little Latin ſticks at the finger ends. This is of little conſequence. If Pol-Œconomicus thinks that I have advanced any principles injurious to public improvement, he will do me a ſingular favour by writing to me a private letter; and if, in a private diſcuſſion, I ſhould diſcover that I am wrong, I ſhall gladly acknowledge my error in your Magazine, and alſo my debt to your correſpondent. The *reſult* of ſuch a diſcuſſion will ſatisfy moſt of your readers; and it is not perhaps proper to take up too many of your pages with abſtract ſubjects.

I truſt you will forgive my requeſt, that you will favour us with your opinion on the ſubject under diſcuſſion. I know your correſpondent will not quarrel with me for appealing to you, who have made the Farmer's Magazine what it is, and who at all times ſeem diſpoſed to admit every fair and amicable diſcuſſion.

Hæc tibi erunt artes; pacisque imponere morem,
Parcere ſubjectis, et debellare ſuperbos.

I remain, Sir, with reſpect,

Your moſt obedient humble ſervant,

Coul, 3d Sept. 1804. GEORGE STEWART MACKENZIE.

NOTE.

THE Conductor, agreeable to the requeſt of his reſpectable correſpondent, intended to have offered a few remarks upon the above communication, and the one therein referred to; but a preſſure

preſſure of buſineſs prevents him from inveſtigating the arguments uſed, with that attention which their importance deſerves. He muſt remark, however, that the value of labour is ſeldom, if ever, regulated by the price of proviſions, but generally, if not always, by the quantity of labour preſented in the market, compared with the demand which appears for it. So far from labour being increaſed in value by a riſe upon the price of proviſions, the fact is, that the latter circumſtance uniformly contributes to render labour of leſs value. When proviſions riſe above par, the moſt of people muſt work more than uſual before they are able to purchaſe an ordinary ſupply of food; and others, who in a great meaſure would remain idle, are then neceſſitated to work ſo as they may live; which circumſtances throw more labour into the market, and ſerve to reduce its value, unleſs a proportionable increaſe of demand appears for the extra quantity of labour that is then preſented.

As expreſſed in a former note, we are decidedly hoſtile to every attempt which may be made to regulate the value of labour: therefore, we are clear that labourers and artizans of every deſcription ſhould enjoy full liberty to bring their labour to market, there to ſell it at the higheſt price which can be procured. This by no means ſubjects the purchaſers to pay a higher price than may by them be conſidered as fair and reaſonable; for if the purchaſer is a judge, he will never conſent to give more than market value. The anecdote given by our reſpectable correſpondent of his two maſons, illuſtrates what is in our view, better than any thing which we at this time can recollect. N.

FOR THE FARMER'S MAGAZINE.

Original Letter from John Cockburn, Eſq. of Ormiſton, to Alexander Wight, one of his Tenants, dated Tottenham, near London, 17th December 1726.

ALEXANDER,

SOME days ago, I received yours of 30th November, which is the firſt I have had from you, or any of your neighbours, of a long time. My wife returns thanks to yours for the receipt for making of ſtarch; and, as we are farmers here, ſhe ſays there is no receipt which ſhe, as a ſiſter farmer's wife, can return, but ſhe ſhall be glad to ſend. I did not ſend the book about flax, as I recommended; for it makes the profit ſo extravagant, that it is not to be minded. But I read all ſuch books; and if I meet with one uſeful thought, I throw away all the reſt; and don't grudge my trouble in reading a vaſt deal of ſtuff, if I find any

thing that helps me to a new and good idea, from which any improvement can be made.

I muſt deſire you will not be diſcouraged by what you ſay of the country people pulling up and ſpoiling your trees. Your ditches, as yet, ſeem to be principally upon the road ſides, where they are moſt expoſed to their ill nature. When you come to ſubdivide your encloſures, I hope you will not find them deſtroyed ſo much; but I deſire you will ſupply what are already deſtroyed; and if you are ſhort of trees, call for what you want from my nurſery. I further deſire, that you will endeavour to catch one of theſe malicious people; and if my own court will not be at the trouble of puniſhing them, I dare ſay either the Sheriff or Juſtices of Peace will do it, to ſuch purpoſe as will deter others. If this is not tried, I muſt ſuſpect your not doing what is in your power; and if I don't find trees in the hedges, I ſhall be diſappointed, and not well pleaſed. It was a bad ſeaſon laſt year for ſowing wheat; but that ſhould not diſcourage ſowing it. It will be found, taking one year with another, the grain that will yield the moſt to the farmer who conſiders the expence of labour, &c.

I am glad you have ſuch encouragement for ſowing clover and rye-graſs ſeeds; and I think you are in the right in trying different ſeaſons for ſowing your rye-graſs. I am convinced that it will come more into faſhion, which will, for many years, keep up the demand for the ſeed; and thoſe who have it to ſell will get the advantage, till the country comes to be fully ſupplied. In countries where clover is much uſed, I have generally heard that the ſecond crop is the cleaneſt ſeed. The beaſts coming from all quarters to eat it, and making you fear its being ſpoiled, muſt go to the account of its not being encloſed, and ſhews the good of encloſures, or rather the loſs of not having them. The preſent weather (if with you as here) is very dangerous to young crops, both of graſs-ſeeds and wheat; for, as we have had a ſtrong black froſt, and rain or ſnow twice during the time of it, which melted as it fell, the wet muſt have gone down to the roots, and no doubt but the ſtrong froſts have gone the ſame length, and ſo may have hurt the wheats in the country, as it has done the beans and peas in my garden. As your potato ground was well dunged and in order, I doubt nothing of your having a good crop of barley upon it, and that you ſaved ſeed. The making ground in good order, and ſo ſaving ſeed, is one of the things I have often recommended, and am glad you have found the experience of it. In accounts of charges and profit, ſaving of ſeed is a conſiderable article. I wiſh you had told me what was ſown, and what you had from it. The profit from the one fourth acre potatoes upon the bad land oppoſite

the

the church, is ſo great that I hope you will go on with them, eſpecially as you find good crops of corn after them. I find my garden ſtuff not only helps my own table, but ſaves me much butcher meat; for my ſervants are fond of it, when not preſſed upon them, but given as a favour.

I cannot ſay that I know any thing of flax by experience; but have always heard, that the ſeed ought to be changed frequently. I therefore adviſe your getting ſeed from Holland, though your own may be excellent, and the ſelling of it may be apparently attended with loſs. If you continue your reſolution of coming into England, I believe I can get you recommendations to ſeveral places in the north, about Stockton and in Yorkſhire. You will find ſome very bad huſbandry; but ſtill, in moſt places, ſomething to be learned upon the main. If you incline to come this length, you ſhall be welcome to lodging, for the time you can ſpare; and ſo you may ſee London and its neighbourhood, and get acquainted with ſeveral things which cannot ſo well be explained by writing. In general, I believe, you may depend upon my inclining to *encourage induſtry*; and, in particular, where I find it in *one of my own tenants, and one born and bred upon my own eſtate, to whom I always think I have a particular relation, and a tie upon me to encourage, more than ſtrangers; ſo you may expect all that a landlord can do for your conveniency in the brewery*, if you think of it, and that you can make by it, without ſuffering in your farm, and other buſineſs in which you are engaged. As I ſhall have a regard for you in any thing I ſhall aſk, ſo I expect you will deſire nothing of me but what is reaſonable; and that you will not think that I am not to have a reaſonable return for the money I have, and muſt lay out before that houſe and all belonging to it is made complete; and alſo a reaſonable rent for the land you have added to it. As I believe *we both incline to do fairly by each other in ſuch things*, I can't think we can differ, if, upon ſecond thoughts, you ſhall judge it convenient for you, and that you can really find advantage by engaging in it, at ſuch a rent as I can reaſonably let it at; and I am ſure you know me well enough, to think that *I don't incline to ſqueeze*, eſpecially from you or your friends, to whom I have always ſhown the greateſt favour.

If you think of this, I would have you employ ſome of your time, before you ſet out, in endeavouring to ſee the Scots way of malting and brewing, both at Edinburgh and other great malting houſes, ſuch as Mr Fall's at Dunbar, and Mr Mathie's in your neighbourhood. You will the ſooner underſtand what you ſee in England, that you have ſome notion of it; and alſo you will be

the better able to obſerve the difference, and make remarks for your future advantage.

You ſay you have no underſtanding of woollen goods. You will eaſily get enough to enable you to deal a little in them in the country retail way. that a country man may find at your houſe each of the things he moſt commonly wants for his family, or other uſes, and ſo provide himſelf at once, in place of going to different towns; otherwiſe, he will go for iron (for example) where he can get cloth and other things for a coat—But you are better judge of this than I. Never *think your letters are tireſome to me; for I am always willing to give the beſt advice I can, and mightily pleaſed to hear of you having ſucceſs in any improvement you undertake. So write freely.*

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Advantage of uſing Hot Lime when Seed Wheat is Steeped.

SIR,

A CORRESPONDENT in No. XVII. of your Magazine, who ſigns himſelf A. S., has favoured the public with ſome remarks on a communication made by the late Sir John Call to the Board of Agriculture, on the ſmut or black upon wheat, wherein he does not diſplay much acquaintance with the ſubject. He aſſumes, as an acknowledged fact, what I am by no means diſpoſed to conſider in that light, viz. that ſteeping ſeed is attended with dangerous conſequences, and uſes ſome arguments which ought not to paſs unnoticed; becauſe a general adoption of his ſentiments would inevitably lead to the moſt direful conſequences. As you deſire the attention of your correſpondents to the ſubject which A. S. attempted to inveſtigate, I cannot forbear from troubling you with the following thoughts, which may be uſed in any manner you pleaſe.

Whether the ſmutty duſt which appears upon wheat is the minute ſeed of a plant or an animalcula, I ſhall not ſtop to examine, though I am of opinion with your correſpondent that it is the latter. But, no matter what it is; all that is neceſſary is a remedy for the diſeaſe. Agriculturiſts have for many years, perhaps for many centuries, uſed ſteeps and pickles as a preventative; and it is conſiſtent with the knowledge of every one of your readers, who is a practical farmer, that ſuch, when properly adminiſtered, are an effectual remedy againſt this baneful and diſgraceful diſorder.

What I object to in A. S.'s letter is the following paſſage:

All

'All ſeem aware that ſteeping ſeed in pickles of common ſalt is attended with dangerous conſequences.' The doctrine, here meant to be inculcated, I deny, in the moſt expreſs terms; and, for a trifling premium per acre, will undertake to inſure the whole ſeed of England from injury by pickling, and the crop from being damaged by ſmut, providing the following *recipe* is judiciouſly applied.

Steep your wheat five or ſix hours in water brought from the ſea, which will ſave expence, if it can conveniently be got; but if at too great a diſtance from the ſea, ſteep it in common water ſalted, till it is ſtrong enough to ſwim an egg, ſtirring it frequently. Procure freſh unſlacked lime from the kiln, and when you begin to let the water off, ſlack your lime with a ſmall quantity of it; when the water is completely drained off, turn the wheat out of your tub, and to every buſhel of it allow a peck of lime; ſprinkle this over it, and keep ſtirring the whole with a ſhovel till they are completely mixed, ſo as every grain may receive a ſhare. When dry, it is ready for ſowing; but ſhould the lime prove troubleſome or dangerous to the ſeedſman's eyes, ſome more water may be thrown upon it; for when the lime is dry, the cure is effected. If the wheat is meant to be drilled, ſift the lime upon it, in the firſt inſtance, and from it afterwards.

The lime, I am perſuaded, is the grand *panacea;* and I only recommend ſalt water in preference to freſh, becauſe the lime adheres more cloſely to the grain, when the former is uſed. The principal difficulty in the proceſs lies in the mixing of the wheat and lime completely together, ſo as every kernel of the wheat may receive its due proportion of lime; for unleſs this is carefully attended to, danger will not be prevented, every kernel that eſcapes the lime being liable to receive and propagate the diſeaſe. I once witneſſed a caſe, which has fixed me moſt firmly in the opinion that freſh lime is abſolutely neceſſary to accompliſh a cure. A very experienced and intelligent farmer having uſed all the wheat he had prepared for ſeed, wanted a few buſhels to complete his ſowing; and being at a conſiderable diſtance from the kiln, determined to make uſe of ſome old lime, which had been long in his poſſeſſion. I examined the crop, along with the owner, in the ſucceeding year, when it was ready for the ſickle, and found, that where hot lime had been uſed, no ſmut prevailed, but that the crop was much hurt where cold lime had been ſubſtituted.

Some caution is certainly neceſſary with regard to lime; for ſhould it be uſed when not properly ſlacked, the great degree of of heat thereby occaſioned would deſtroy the vegetative principle of the ſeed; but if applied with the precautions recommended, I am perſuaded that the liming and pickling, ſo far from proving

prejudicial,

prejudicial, may, in ſome ſlight degree, act as a manure. I have practiſed the method of pickling now deſcribed for more than twenty years, and never ſuffered injury from ſmut. Once, and once only in that time, during my abſence from home, and when my regular ſeedſman was indiſpoſed, the proceſs was left to an inexperienced hand; and I was a material ſufferer, by his applying the lime without ſlacking it ſufficiently. I am yours, &c.

Norfolk, 1804. T. W.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

SIR,

I believe that the inſertion of poetical articles forms no part of your plan; yet I hope a deviation from it, in favour of the encloſed Elegy, will not be unacceptable to the majority of your readers. The Elegy now ſent you was written ſhortly after the nation loſt that eminent agriculturiſt, the DUKE of BEDFORD, and originally circulated among the members of a private Society, who conſidered themſelves as greatly benefited by his noble exertions. From a member of that Society I received a copy of the Elegy, and was permitted to requeſt its inſertion in your valuable Magazine. I am yours,

A FRIEND TO AGRICULTURE.

An Elegy, ſacred to the Memory of the Moſt Noble FRANCIS RUSSEL, DUKE of BEDFORD, *&c.*

WHAT ſounds of woe from *Woburn* groves reſound!
What plaintive murmurings fill the rural plains!
Why hangs yon gloom *Auguſta*'s towers around?
Why pours *Britannia* ſad the ſorrowing ſtrains?

Her much-lov'd Lord ſweet *Woburn* ſad bewails,
Their Patron gone, the ſylvan meads deplore;
In mournful gloom her woes *Auguſta* veils,
Britannia weeps that BEDFORD is no more!

Ah! BEDFORD gone!—who can the tear reſtrain?
What boſom bleeds not at his early doom?
Oh! virtue, grandeur, excellence, how vain!
Nought can avert the triumphs of the tomb!

In

In life's gay morn, bright did his beauties ſhine,
Each charm bloom'd fair, each virtue glow'd ſerene;
Joy ſmil'd around, Peace ſtrew'd her ſweets divine:
And Hope, exulting, hail'd the bright'ning ſcene.

As youth roll'd on, ſtill fair the proſpect glow'd,
His noble form increaſing charms aſſum'd,
Truth fir'd his breaſt, love all its warmth beſtow'd,
And each lov'd grace in ſmiling ſweetneſs bloom'd.

To ſtore his mind with wiſdom's choiceſt ſweets,
With ardour fir'd, and emulous to excel,
He ſcience rang'd, explor'd the Muſes' ſeats,
And roam'd the haunts where Taſte and Genius dwell.

In bloom of life, grac'd with each manly art,
To grandeur, wealth, and rank's firſt honours rais'd,
Russel's * fam'd deeds inſpir'd his gen'rous heart,
And all his virtues in his boſom blaz'd.

Eager the Patriot and the Sage to ſtand,
Firm, brave, determin'd, and upright he ſhone;
To check abuſe, ſubdue uſurp'd command,
And guard the Laws, the Country, and the Throne.

Bold to reſiſt Oppreſſion's tyrant ſway,
Applauding Senates hail'd his patriot ſtrain:
Exulting Freedom wak'd the daring lay,
Diſſenſion ceas'd, and Faction rag'd in vain.

Keen to repel the proud invading foe, †
And tenets cruſh, which ſocial bliſs derange.
Dauntleſs he ſtood, to ward the threaten'd blow,
Still Diſcord's voice, and blaſt the ills of change.

Yet, though he ſhrunk not from the warrior's toil,
His country's good ſtill form'd his glorious aim,

By

* The excellent William Lord Ruſſel, who flouriſhed in 1680. Of this Lord Ruſſel his Grace was the great great grandſon. After his death, his father, William the fifth Earl of Bedford, was created by King William, Marquis of Taviſtock and Duke of Bedford; and among the motives for this promotion, aſſigned in the patent, it is obſerved,—'that this was not the leaſt, that he was the father to the Lord Ruſſel, the ornament of his age, whoſe name could never be forgotten, ſo long as men preſerved any eſteem for ſanctity of manners, greatneſs of mind, and a love to their country, conſtant even to death.'

† On the threatened invaſion of France, the Duke of Bedford joined a Volunteer corps, in which the Lord Chancellor of England alſo was enrolled.

By uſeful arts to meliorate the ſoil,
Improve its culture, and extend its fame.

By him the Plough its honour'd rank reſum'd,
Flocks, tillage, herds, unequall'd luſtre ſhed;
Each form improv'd the rural arts aſſum'd,
Arts † which ſupport, and *Britain*'s grandeur ſpread.

To guide the Plough more uſeful good imparts,
Than ſkill in arms to dare the martial deed;
To ſtimulate States to ſhine in rural arts,
Is nobler far than conqu'ring hoſts to lead.

Charm'd with theſe arts, he towns and cities rear'd,
Made deſarts bloom, and groves the waſtes adorn;
Peopled lone wilds, the barren woodlands clear'd,
And bade the vallies wave with golden corn.

By taſte improv'd, fair roſe the cultur'd farm,
Flocks, herds, and villas, grac'd the flow'ry plains;
Health, peace, and joy, ſpread round each grateful charm,
Contentment cheer'd, and Plenty bleſs'd the ſwains.

Vice fled the vales, with Lux'ry's blaſting train;
Ambition, guile, and treach'ry were unknown;
Amid their toils ſoft flow'd the cheerful ſtrain,
And round the cots the Loves and Graces ſhone.

Sweet ſcenes of bliſs!—which BEDFORD bade to ſmile,
No more his preſence ſhall your charms reſtore!
Yet memory oft ſhall mark his glorious toil,
And, ſorrowing, muſe on joys that riſe no more.

'Mid cultur'd wilds where flocks untended ſtray,
Where paſtures ſmile, and golden harveſts wave,
The ſwains, enraptur'd as they roam, ſhall ſay,—
"Theſe waſtes to bloom, the noble BEDFORD gave."

Bring ſnow-drops, violets, and the primroſe bloom,
The crocus, daffodils, and hyacinths ſtrew;
With Spring's firſt flow'rs adorn his early tomb,
His ſacred urn with love's ſoft tears bedew.

Let fond remembrance mark his faultleſs fame,
Dwell on his virtues, and his deeds emblaze,—
Deeds which awak'd great GEORGE's * loud acclaim,
And ſtill ſhall flouriſh in his country's praiſe.

Yet,

† Pâturage et labourage ſont les deux mammelles de l'Etat.

* On receiving the account of the death of the Duke of Bedford, the King moſt feelingly exclaimed—"The death of ſo good a man is a public loſs!"

Yet, oft as memory *Cheynies'* fane reviews,
And pours the ſigh where low his relics lie;
On nobler ſcenes let raptur'd fancy muſe,
Unveil the climes where BEDFORD lives on high.

Time does not end that life man here deplores,
Nor death the ſoul's unbounded pow'rs deſtroy;
Looſe from the world, on angels' wings it ſoars,
And, free, expatiates the bright realms of joy.

Far beyond ills, by ſeraphs crown'd above,
He joins the juſt in bow'rs of bliſs reclin'd;
Drinks life's pure ſtream,—adores Creative Love,
And to its ſource exalts his boundleſs mind.

Yes; doom'd by Heaven, the good ſhall never die,
For endleſs glory Virtue's toils ſhall crown;
Their honours here ev'n Time's proud rage defy,
The Patriot's name ſhall ſtill live in renown.

Still as their ſweets the flow'rs of Spring unveil,
In growing charms ſhall BEDFORD's memory ſhine;
His works of Peace *Britannia's* ſons ſhall hail,
And deathleſs laurels round his urn entwine.

While ſocial virtue cheers life's humble ſhed,
While Patriot worth to Freedom's ſons is dear,
To diſtant climes his glorious fame ſhall ſpread,
And lateſt time his honour'd name revere.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Upon Straighting Ridges.

SIR,

YOUR Publication came into my hand only of late, for which I am ſorry, as I have not hitherto peruſed any thing of the kind which has afforded me ſo much ſatisfaction. Give me leave, at this time, to add my mite to the large ſtock of information tranſmitted to you, which I hope may find a corner in your uſeful Repoſitory.

In your third volume, page 278, ſome very good hints are offered reſpecting ſtraighting ridges, a ſubject of much importance to the agriculturiſt, as this operation tends both to facilitate the execution of labour, and to beautify and improve every branch thereof. I believe few perſons have ſtraighted more ridges than I have done, eſpecially upon wet clay ſoils, in which

ſituation

ſituation the operation is undoubtedly moſt difficult to execute; whereas on dry ſoils, very little judgement or ſkill is required to accompliſh this change, with ſafety to the ground and advantage to the occupier.

In 1794, I fallowed and ſtraighted a field of about thirty acres, which had been oats the preceding year. The ſoil was a wet clay, and the ridges were very unequal in breadth, from ten to thirty feet, intermixed with butts or guſſets, which are always detrimental to ſuch lands, as they occaſion the ploughs, &c. to turn often upon the other ridges, by which means the prints, or marks of the horſes feet, are left unfilled up. The firſt operation conſiſted in cleaving down the ridges. The field was then ploughed acroſs, and thoroughly harrowed; but before the broad ridges could be brought to a level, ſeveral ploughings were neceſſary, which were accordingly given. The ſeaſon, however, was far advanced, before theſe neceſſary operations could be effected; and, as lime could not at this time be applied with advantage, I was under the neceſſity of laying it up in heaps, in an adjacent graſs field, ſo as it might be expeditiouſly laid on whenever the field was ſtraighted. The next conſideration was, to form the ridges in ſuch a manner, as to prevent water from ſtagnating upon the ground. With this view, I run them partly eaſt and weſt, and partly north and ſouth, as the level would admit. When the ridges were thus formed and gathered up, the lime was applied, and a good croſs-harrowing given, in order to fill up the furrows.

It being now the latter end of October, and the weather very wet, I thought it advantageous, in giving the ſeed-furrow, to yoke the horſes in line, and not abreaſt, as is the uſual practice. At this time, ſome well meaning old-faſhioned farmers in the neighbourhood appeared very zealous to correct my miſtaken ideas:—they even called out to my ſervants, 'What! is your maſter going to ſow wheat there? He will repent if he does. Tell him he has ſpoiled the field for years to come.' Theſe kind advices and exclamations, however, had but little effect. I was determined to ſhake myſelf out of the trammels of the old ſchool, and accordingly went on with my operations. The whole field was ſown on 6th and 7th of November, and the braird appeared about the beginning of December. The weather having been wet for ſome days after the wheat was ſown, it appeared rather thin in March, but always retained a dark green colour. It improved much during the ſummer months; and, at harveſt, turned out as good a crop as ever I ſaw upon ſuch poor wet ſoil, the produce per acre being from 32 to 34 Wincheſter buſhels of good marketable grain. Next year I ploughed

ploughed the field again, and ſowed one half with oats, and the other half with peas, both which were as good crops as could be expected. Perhaps it may be thought that I ſhould have ſown graſs ſeeds among the wheat; but it is my opinion, that, when ridges have been altered, a ſecond fallowing is neceſſary, before the field can be profitably laid down in graſs. Laſt year, I ſtraighted a ſmall field in the above mentioned way, which has anſwered my expectations to the full. It was ſown with graſs ſeeds, which at preſent promiſe well.

The advantages reſulting from the practice of ſtraighting ridges are obviouſly many and great. More work is performed both by plough and harrows, and to better purpoſe, in a given ſpace of time. Much ſeed, too, is ſaved; for when the ridges are at or below eighteen feet in breadth, which they ought never to exceed, two caſts will ſuffice; whereas, in their former ſtate, three or even four caſts will be neceſſary in ſome parts, and in others, one will be too much. Straighting ridges, and making them all of one ſize, alſo greatly furthers harveſt work, as it is well known, that ſhearing is more expeditiouſly performed upon them, than upon thoſe that are unequal with one another, or ſuch as are broad at one end and narrow at the other. The laſt, though not the leaſt advantage, which I ſhall notice at preſent, is, that wheat is not ſo apt to canker upon ſtraight as upon crooked ridges. I will not now inquire how this comes to be the caſe; but leave it to the conſideration of thoſe who delight in abſtract philoſophical reſearches:—it is ſufficient for me to be aſſured from experience that it is ſo.

It is much to be regretted, that the practice I have been deſcribing is not more generally attended to. Were landlords to give marks of approbation and encouragement to ſuch of their tenants as they obſerve to be active and enterprizing, it would have a powerful tendency to promote agricultural improvement in general, as well as the particular practice I have been recommending. This, however, is a thing rather to be wiſhed for than expected; for, at preſent, the man of energy and exertion, and the ſloven, are treated in the ſame manner by the generality of landlords, who conſider the receipt of their rents as their whole concern in the matter. Prejudice, too, is a great enemy to improvement. If an old-faſhioned farmer happen to breed a ſon in that line, he is ſure to caution him againſt all innovations, both in principle and practice. 'See,' will he ſay to him, 'what a fortune your grandfather made. Could he have done this, think you, had he followed the fooliſh notions of ſome farmers now-a-days about ſtraighting ridges?' &c. &c. Thus, from time to time, he inſtils theſe ideas into the young man, who

who has not perhaps penetration enough to diſcover that his grandfather amaſſed wealth, not in conſequence of farming in a ſuperior ſtyle, but in conſequence of an advantageous leaſe from the proprietor, to whom, it is probable, he did not pay as much rent as is now demanded for the corn tithe of the ſame poſſeſſion.

Allow me, Mr Conductor, a few words on the improvement of waſtes, and I have done.

It is really ſhaméful to obſerve what quantities of land are lying waſte in different parts of the country, which might be rendered profitable to individuals, and to the public, were proper means uſed for that purpoſe. As farms in general are now let at rack-rent, and on ſhort leaſes, it cannot excite ſurpriſe, that farmers ſhould decline laying out their capitals in undertakings, from which time will not perhaps allow them to reap an adequate return. In ſuch caſes, the proprietor ought to put his ſhoulder to the burden, and bear, at leaſt, a part of the original outlay, which muſt be conſiderable; and if he underſtands his own intereſt, he will do it cheerfully. Where ſtones are to be removed, or drains cut, theſe things ought certainly to be done at his expence; and he ought alſo to bear one half of the ſum that may be neceſſarily expended in purchaſing lime. Suppoſe twenty acres, or even a leſs quantity, thus improved every year, how much would the appearance of his property be altered, as well as the value thereof increaſed in a ſhort time, and what advance of rent might he not expect at the expiration of the leaſe? An acquaintance of mine has poſſeſſed a farm for about twenty years, conſiſting of nearly equal portions of good rich land and waſte; and during all that time a ſingle acre of the waſte has not been improved. The reaſon is plain,—the proprietor will give no aſſiſtance; and the tenant, who finds he can live comfortably by the good land alone, will not embark ſingle-handed in ſo arduous and hazardous an undertaking. Thus, a large quantity of ground, not of the worſt quality, continues, and it is probable will continue, in an unproductive ſtate, till ſome future proprietor ſhall ariſe, who may ſee it to be his intereſt, as well as his honour, to adopt a ſyſtem diametrically oppoſite to that of the preſent one.

Northumberland, 1804. COQUETTUS.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

SIR,

IN the ſtrictures Sir George Mackenzie is pleaſed to make on your correſpondent A. S.'s letter relative to the analyſis of lime and marl, I obſerve he expreſſes a wiſh to be informed what was the one half *per cent.* reſiduum, or alloy, contained in the lime he mentions as belonging to me. As this ſeems to imply a doubt of the fact, I conſider myſelf called upon to tranſcribe a letter to me from the Reverend Mr Headrick, well known as a mineral ſurveyor, and a gentleman of literary merit, as I preſume it was by a peruſal of that letter A. S. obtained his information. I beg leave to remark, that I had Mr Headrick's permiſſion to make full uſe of his name, and that he took the trouble to cauſe the workmen give him fair ſpecimens of the different ſtrata, which he packed up, numbered, and took to Edinburgh with him; and he aſſures me, that he conducted the proceſs of analyſis with ſtrictneſs and accuracy.

Extract of a Letter from the Reverend Mr Headrick to Mr Low of Annfield, Fifeſhire.

'Sir,—I have juſt finiſhed the analyſis of your limeſtone, and I confeſs that the reſult aſtoniſhes me. It turns out to be the pureſt ſtratified limeſtone that ever paſſed through my hands. I have met with ſome fine ſparry limeſtone, which entirely diſſolved in acids, without leaving the ſmalleſt alloy or refuſe; but all the ſtratified limeſtone I ever before examined run from 60 to 85 *per cent.*; and I had even laid down 85 as the *maximum* of ſtratified limeſtone, becauſe I never ſaw it exceeded, except in one inſtance, and that was 90 and ſome fractions.

'Though bare inſpection ſhowed yours to be very good, I was not prepared to expect it to be ſo pure as it actually is. The ſtrata were examined in pairs, as they were put up in the papers, and, as nearly as I could gueſs, in the ſame relative proportions with the ſize of the pieces. The whole was conducted with the utmoſt rigour, and the following is the reſult.—No. 1. viz. the higheſt and thin ſtratum below it, contained of carbonate of lime, 94½ parts in 100. No. 2. being 3d and 4th ſtrata, 98 in 100. No. 3. being 5th and 6th ſtrata, 99 in 100. No. 4. being 7th and 8th ſtrata, 99½ in 100. The laſt number contained a ſmall fraction more of carbonate of lime, which my inſtruments could not meaſure, and therefore I gave it againſt the ſtone. The alloy or refuſe, in all, was fine clay. No. 2. & 3. contained a few particles of ſand. All the ſpecimens contained a portion of tar and coal culm. I threw the tar out of the calculation, but could not get rid of the culm. In fact, theſe ingredients cannot be conſidered as alloy, becauſe they are utterly con-

fumed in the burning of the ſtone; and, as far as they prevail, aid the burning. The only way to aſcertain what proportion the culm bears to the maſs, is to analyze the lime after it is completely burnt. Were this done, I have no heſitation in ſaying, that your limeſtone approaches more to abſolute purity than the Sunderland, or, perhaps, any other limeſtone in the world.

'You can eaſily ſee the great utility of chemical analyſis. I have often pitied a poor man, when I ſaw him taking a long journey, and loading his carts with a greater proportion of clay or ſand, than of pure lime; or when I ſaw him carrying even good lime imperfectly burnt.

'Were all limeſtone analyzed, every man would know what he was doing who uſed lime; and thoſe who ſerve the public with lime ſhould take care that it is well burnt, otherwiſe they impoſe upon their cuſtomers a load wholly uſeleſs to them. When lime is to be uſed on the ſpot where it is manufactured, theſe things are of leſs importance; but when conveyed to any diſtance, they are of the utmoſt moment.'

The above, Sir, is a literal tranſcript of Mr Headrick's letter; and I preſume Sir George M'Kenzie will conſider it as a full anſwer to his queſtion. I beg leave to think that he has made rather ſtrong remarks on A. S.'s letter, eſpecially as his own manner of analyzing lime and marl ſeems to turn out the ſame as that of A. S., whoſe only error Sir George concludes to be a too great confidence in the correctneſs of the apothecary who prepares the acid. It might perhaps be well that every drug an apothecary may ſell was alſo previouſly purified. But does the phyſician doubt the pure quality of the medicines he preſcribes to his patient from a creditable laboratory? No: he preſumes them pure as they ought to be. Muſt not candour therefore pronounce many of the obſervations of Sir George to be frivolous; and as it is not neceſſary to farmers to learn to analyze lime to *minuteneſs*, A. S. ſeems to go as far as eſſential in directing them how to know the comparative value of different limes. The experiments would naturally be made on the different limes at the ſame times by the *ſame acid*; and the different reſults would be ſo very nearly in the ratio of their purity as to be a matter of little moment to carry the proceſs to mathematical exactneſs. I beg alſo to remark, that A. S.'s theory of analyzation is not only the ſame as that of the great chemiſt Dr Black, and the Biſhop of Llandaff, but that of Sir George himſelf, with this diſtinction only, that he does not conſider it as abſolutely eſſential to aſcertain whether the alloy be ſilex, argil, or oxyd of iron. I remain, Sir, your moſt obedient ſervant,

Annfield, Oct. 2d, 1804. ALEX. LOW.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

SIR,

As your Magazine is ſolely devoted to the purpoſes of agriculture, every fact, and every experiment that tends to enlarge our knowledge, and to promote the ends of that great national concern, ought to have a place in it. I am induced, from this motive, to lay before you an experiment upon a ſmall ſcale, which I never heard had been made before, but which may in time become of great public utility, if it ſhall be found, upon farther trial, to ſucceed as well as in the caſe to which I allude. You may fully depend on the truth of the fact itſelf.

A friend of mine having occaſion to obſerve the partiality of black cattle for the common garden parſley, and their preference of it, when growing, to almoſt any other green food, took it in his head to try how it would ſucceed in a field that he was going to ſow down for paſture. He accordingly ſowed two or three ridges with parſley ſeed, and the reſt of the field with clover and ryegraſs. As ſoon as the field was ready for paſture he led his cattle into it, and it was perfectly evident that they preferred that part which was ſown with the parſley to any other part of the field, inſomuch that they never touched the reſt while there was a ſingle blade of parſley to be had. Horſes were equally fond of it. He had not an opportunity to try ſheep upon it; but the probability is, that they would, if poſſible, have been fonder of it, and thriven better, than any of the other two. This, therefore, ſeems worthy of a farther trial. We know that black cattle, ſheep, horſes, and indeed every other animal, always prefer that food (when they have it in their power to make a choice) that is moſt agreeable to them, and moſt conducive to their health. We know alſo that parſley is a moſt wholeſome vegetable for the human ſpecies. It is a powerful antiſeptic. If we were to reaſon from analogy, we ſhould ſuppoſe that its beneficial properties ſhould extend to the animal creation in general. As it is a perennial plant, it will anſwer well for fields that are to be laid down for paſture for a conſiderable while. Sheep, in particular, being of a tender and delicate conſtitution, and eſpecially ſubject to bowel complaints, its antiſeptic quality may be of great uſe to correct theſe. The difficulty may be at firſt to get the ſeed in any conſiderable quantity; but that may ſoon be remedied, if the experiment be thought worth while. I would ſuppoſe that the ground upon which it is ſown muſt be good, in good condition, and clean, otherwiſe it will not have a fair trial.

AGRICOLA.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

SIR,

I thank you for the honour done me in inſerting a paper of mine in your laſt Number. Conceiving it of importance to communicate the remarks I have made on the preſent crops, in the courſe of a journey through ſeveral counties of the kingdom, I ſhall now (when I have arrived at a place where I generally ſtop for ſome time) endeavour to tranſmit my opinion, ſo as to reach you in time for publication in your next Number, ſhould you deem it worthy of inſertion.

Upon dry lands, and the beſt loams, I think the crops of wheat, oats, barley and rye, are generally as bulky as thoſe of laſt year, and beans and peas conſiderably more ſo. Upon all other kinds of land, they appear to me not to exceed three fourths of the bulk of 1803. From what information I can collect, the yield from the ſtraw is not ſo great as in the preceding ſeaſon, more eſpecially that of wheat. Some accurate huſbandmen have ſtated, that the quantity of that grain, which, upon moſt lands, was laſt year the produce of about ſix ſtooks (or 72 ſheaves), can this year ſcarcely be obtained from 8 ſtooks; that the quality is generally inferior; that in various diſtricts of England, ſeveral fields are ſo much injured by blight and mildew, that their ſcanty produce will not weigh three fourths of the uſual weight per buſhel; and that ſmut is unuſually prevalent. My own obſervations, I am ſorry to ſay, have fully proved the truth of theſe ſtatements as to blight, mildew and ſmut; and I have but little doubt of that regarding the yield and quality. Beans and peas are reckoned, upon the whole, a very productive crop; but proper trials have not yet been made. The quality of barley, oats and rye, is good; the quantity of land, however, which was laſt ſpring ſown with the former grain, was much leſs than uſual, which militates againſt the arguments of thoſe who think that low prices will extend aration, and ſecure plenty. As moſt of our tillage lands are either ſtrong or wet, I conclude that the preſent crop will not prove ſo productive as that of laſt ſeaſon. I hope, however, that this misfortune will be imputed to the real cauſe, adverſe weather, eſpecially to an extreme wet and late ſpring.

Several weeks ago, I read in the Tyne Mercury a paper, of which the following is a copy; and as I have underſtood, for ſome years paſt, from information received from eminent breeders, both in the midland counties, and in the north of England, that

that the new Leiceſters were by far the moſt profitable breed of long-woolled ſheep, I aſſure you, Sir, I was not a little ſurpriſed to hear that the opinions of its author have not been controverted by ſome of the followers of the celebrated Bakewell.

(COPY.)

'TO THE EDITOR OF THE TYNE MERCURY.

'SIR,

'For a ſeries of years, it has been faſhionable for certain newfangled breeders in the county of Northumberland, and North Durham, to extol, without diſcrimination or exception, all kinds of the Leiceſterſhire breed of ſheep (in which the name of *Culley* has been uniformly introduced), and to diſparage as indiſcriminately all other kinds of ſtock. Without entering into the patriotiſm or liberality of ſuch ſweeping kind of concluſions, wherein the good qualities of every other ſpecies of ſheep in Northumberland are kept entirely out of view, an opportunity has only lately preſented itſelf, wherein I have diſcovered not only the illiberality, but the falſity of their general reaſoning. In the Farmer's Magazine, I have obſerved many communications from Northumberland, in which this doctrine is held forth; and in particular, the Number for Auguſt 1803 contains a paper, ſigned 'A Northumberland Farmer,' wherein it is aſſerted, that Mr William Charge late of Chaſby, on the Yorkſhire ſide of the Tees, brought tups of the Diſhley, or new Leiceſter breed, to Morpeth, before the Culleys brought any, and ſold them there at no great prices. Mr Henry Grey of Bamborough, and ſeveral others, who were in poſſeſſion of the large improved breed of Bamboroughſhire, bought ſome of theſe tups, and were wonderfully benefited; but for want of knowledge in not continuing that blood, and croſſing them again with the large Tees-water breed, they ſoon loſt the benefit of the firſt valuable mixture.' In this quotation, there ſeems a kind of reflection upon Mr Henry Grey's 'want of knowledge,' that looks ſo like a puff direct in praiſe of Mr Culley's exertions, and his ſuperior knowledge, that we can eaſily perceive the object of contraſting the one with the other. But without glancing at the merit (if there was any) of attempting to croſs any ſpecies of ſheep with the Bamboroughſhire, I will prove that the Bamboroughſhire, the unadulterated Bamboroughſhire breed of ſheep are at this preſent moment ſuperior, in point of ſize, weight, and quality of wool, to any of the Leiceſterſhire ſheep that ever were reared or improved by Mr Culley. There is at preſent one of the moſt opulent and reſpectable farmers in Bamboroughſhire, a man who can well judge of the real advantages to be obtained in diſcriminating betwixt one

ſpecies of ſheep and another—one who has never adopted the plan of croſſing his ſheep with the Diſhley or Leiceſterſhire breed, nor ever in his life was known to give above 50s. for the uſe of a tup for one ſeaſon. From this farmer, one of the moſt eminent butchers in Northumberland has repeatedly declared, (and will prove, if required, what I aſſert), that he has bought from him and killed, this year, the beſt lot of ſheep, which were of the old Bamboroughſhire breed, that ever he killed in his life. The number of the lot was not leſs than eighty. I leave you and the public, therefore, to judge of the merit of the Leiceſterſhire breed, and that of the Bamboroughſhire.

VERITAS.'

Being lately in Northumberland, I inquired particularly as to the ſize and weight of the eighty ſheep ſo highly extolled in the above paper, and generally received for anſwer, that they were well found, and weighed, upon an average, (when two years old) 34 or 35 lib. per quarter. I obſerved that the heavieſt ſheep were not the moſt profitable, and adverted to the controverſies between the advocates of the Lincolnſhire, and thoſe of the new Leiceſterſhire breeds; ſtating that, probably, the latter would have raiſed more money *per acre* for their food than the Bamboroughſhire ſheep. Though, individually, leſs in ſize and weight, I aſſerted, that the new Leiceſters conſumed proportionally leſs food than any other breed. I was aſked for proofs, and advanced the opinions of ſome of our moſt eminent breeders. Theſe, however, the advocates of the large ſheep refuted, by ſtating, that accurate comparative trials had demonſtrated the contrary; that ſome of theſe experiments were referred to by your correſpondent *Paſtor junior*, in your Fifteenth or Sixteenth Number; that they have not been diſcuſſed by any of the breeders of the new Leiceſters, or any other contributors to your work. Here I was ſilenced, but not convinced; and as my opinion is ſtill favourable to the ſuperior merits of the Diſhley breed, I could only ſay, that upon going into the weſtern counties, I will make very minute inquiries as to theſe experiments, and perhaps communicate the reſult to you for publication. In the mean time, I ſhould be glad if ſome better informed correſpondent would inveſtigate the comparative merits of the different breeds of the long-woolled ſheep; for I cannot but conſider it injurious to the community, that impreſſions ſhould be made in favour of the *huge* ſheep mentioned by *Veritas*; and am, yours, &c.

VIATOR.

TO

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Thoughts on the Poor Laws, and preſent State of the Poor in Scotland.

SIR,

In your Number for February laſt, I met with a very rational and intelligent letter upon the poor laws of Scotland, containing a juſt repreſentation of their general effect upon the manners of the people, and drawing a ſtriking contraſt betwixt the Scotch and Engliſh ſyſtems.

This is no doubt a ſubject directly connected with agriculture; for, whatever tends to operate in a particular manner upon the habits and opinions of the people, muſt more or leſs affect the ſucceſs of their common employments, and is therefore a proper ſubject of public diſcuſſion.

There is one ſhort paragraph, however, of the communication I allude to, which is not altogether in uniſon with my ideas on the ſubject. That I may be the better underſtood, I ſhall copy the paſſage; and, ſhould your correſpondent Agricola chance to ſee my obſervations in your Magazine, his good ſenſe will probably prevail on him to allow that I am not entirely wrong. 'Notwithſtanding that the lateſt unrepealed acts of our Scots Parliaments evidently authoriſe this ſtenting or taxing, when abſolutely neceſſary; yet the good ſenſe of the nation ſeems to have declined this pernicious ſyſtem, at leaſt in country pariſhes, and it may be now ſaid to have nearly gone into deſuetude, as a meaſure of common and ordinary regulation. There are only a very few pariſhes in Scotland, where this ſyſtem of taxation for the poor prevails; and theſe, to their ſad experience, feel the bitter conſequences of it, in the increaſe of their poor and poor's rates, and all the conſequent idleneſs, profligacy, and want of foreſight and frugality which muſt ever accompany a too liberal proviſion for the poor in any pariſh.'

I do not pretend to contradict any thing ſtated as fact by your well informed correſpondent, but as little am I diſpoſed to agree, that the principle or practice of ſtenting or taxing, according to law, for the ſupport of our moſt indigent and infirm fellow creatures, ſhould be totally and perpetually laid aſide, even in country pariſhes.

I admit that the ſyſtem is apt to lead to abuſe, and, if unwarily adminiſtered, is fraught with pernicious conſequences; yet I cannot avoid thinking that abuſes may be guarded againſt and prevented.

For what purpoſe are men endued with diſcretion, foreſight and prudence, if theſe qualities cannot be exerted in the plaineſt affairs?

I would therefore proceed, in this caſe, with a delicate hand, only allowing the plan to take effect for the ſupport of the moſt deſerving and indigent objects, always endeavouring 'to draw the proper line of diſtinction betwixt calouſneſs of heart, and indifference about the concerns of the poor, on the one hand,' and too liberal proviſion for their ſupport, on the other. I know ſomething of an inſtance of a poor deranged perſon being maintained in this way; and I would only recommend ſimilar relief to be extended to ſuch as are in abſolute neceſſity, being unable either to work or beg. Of ſuch objects of diſtreſs in country pariſhes, the number, I dare ſay, will not be found much to exceed the average of one in two hundred of the whole population. Where there are no rates or aſſeſſments in uſe, theſe deſtitute beings are almoſt wholly ſupported by a few individuals, whoſe benevolence and charity are excited in a much higher degree than that of their perhaps more wealthy neighbours. By theſe means, the burden is partially born, and material injuſtice takes place in the community. The miſer continues to hoard, and the ambitious man to aggrandize, whilſt the man of humanity and charity pays for all the three; for, in the maintenance of the objects I at preſent allude to, the Sunday collections, or any other common pariſh funds, go but a ſhort way. For ſuch, therefore, legal aſſeſſments ſhould be levied, and applied with all œconomy and good will. No doubt it has a very unfortunate effect to indulge the people in the opinion, that their pariſhes are to provide for them as ſoon as they are unable ſufficiently to provide for themſelves. Yet it is cruel and unneceſſary to inculcate the belief, that, in caſes of great infirmity and extreme old age, accompanied by unavoidable poverty, no extraordinary public ſupport is to be beſtowed, but that, excepting the ſcanty allowance from common pariſh funds, dependence can be placed alone on the precarious charity of unfeeling relatives and accidental neighbours. This is adding to the bitterneſs of misfortune's cup, and induces the poor man to believe that he has worn out his ſtrength, and the vigour of his days, in the ſervice of an ungrateful community.

In the part of the country with which I am moſt acquainted, many of the heritors reſide little on their eſtates, and ſome of thoſe that do, as well as the majority of the former, are extremely inattentive to the concerns of the poor; for it rarely happens that a diſpoſition to do good, increaſes along with the means to gratify it. On the contrary, opulence and avarice frequently meet in the ſame individual, and benevolence gradually diſappears as riches accumulate. Further, the country gentlemen are often not very exemplary in their attendance on public worſhip. Some rarely attend

attend at all; ſo that the Sunday collections are, comparatively, little augmented by their donations. Where this is the caſe, the ſtatutes reſpecting the poor, in all juſtice, ought more or leſs to be brought into practice. To my certain knowledge, the heritors in many pariſhes, in place of defraying the half, do little more than defray the tenth part of the contributions for the poor; and no one can deny that this is palpably unlawful and unjuſt.

I am informed, that aſſeſſments are not uncommon in Perthſhire; and I have heard particularly of one pariſh in that county, where, in order to avoid the aſſeſſment, the heritors make a practice of doubling the ordinary collections at church; that is, if the collections amount to 10l. in a given time, the heritors contribute other 10l. This is certainly a fair and honourable compromiſe, and I am ſorry it is not more general.

I am ſenſible, that aſſeſſments for the poor are a bugbear to many, merely from the want of reflecting how eaſy it might be to avoid abuſes in going through with the undertaking. They immediately tell you of the poors rates of England, and ſagely aſk, if 48s. on the pound be not a pretty ſerious burden. This is talking to no purpoſe. They might, with fully as much reaſon, reſolve never to touch the ſocial glaſs, becauſe they have heard or known inſtances of perſons drinking themſelves to death, or, what is more common, of diſſipating all their ſubſtance in that way.

It may ſafely be ſuppoſed, there is as much temptation in the one practice as the other, however odd the compariſon.

I would certainly be an opponent to any extent of aſſeſſment that would have the ſlighteſt tendency to relax the induſtrious and œconomical habits of the people; and that evil might be eaſily prevented by uſing a moderate ſhare of prudence and local knowledge.

I cordially agree with Agricola in all his other obſervations. He has excellently deſcribed the impoſitions practiſed upon the inhabitants of country pariſhes by the vagrant and profligate poor of the towns. This, in many parts, amounts to an intolerable nuiſance, and is ſhamefully overlooked by the reſident Magiſtrates of the country. Theſe wretches, who are moſtly the offſcourings of ſociety, haraſs the country in continual ſucceſſion, not only extracting the worſt beſtowed charity, but levelling fences, breaking into encloſures, and occaſionally ſtealing what they can conveniently carry off. Indeed, the Juſtices of the Peace now and then iſſue orders at their quarter-ſeſſions to conſtables, to chaſe away theſe depredators, or apprehend them, &c.; but the Juſtices themſelves ſeem to be at no pains to have their orders

carried

carried into execution, and, perhaps, even permit alms to be given to the vagrants at their own houſes. There ought to be conſtables in each pariſh, particularly ſet apart for this buſineſs; and theſe, if well inſtructed and well paid, would quickly redreſs the grievance.

In the ſouthern and weſtern diſtricts of Scotland, there are frequent arrivals of whole families of beggars from Ireland, who are generally allowed to infeſt the country, and pillage the inhabitants without moleſtation. This practice is of long ſtanding. I have even heard it affirmed, that in the north of Ireland, it is no-way uncommon with people of this profeſſion to migrate, when they have finiſhed the planting of their potatoes, on purpoſe to ſubſiſt on the charity of their fellow-ſubjects in Scotland, until their potatoes be ripe, or, as they themſelves expreſs it, until their potatoes be fit for digging; and about that ſeaſon, indeed, many of them return, though a pretty good proportion may be met with all the year round.

I apprehend it is our own police, and not the police of Ireland, which we have to blame for this abuſe. In this caſe, our negligence and ill-judged tenderneſs are injurious to the induſtry and good order of the Iriſh themſelves, and afford encouragement to their immorality and idleneſs. I am convinced, the better informed people of Ireland would give us more thanks, were we to put a total ſtop to the practice. Iriſh labourers are extremely uſeful in theſe parts of Scotland; but, for Iriſh beggars, there is no occaſion.

But, to return to the ſubject.—There is ſtill another method of providing for the wants of the poor, which Agricola has been ſilent on, and which I do not at preſent remember to have ſeen at any time taken notice of in your Magazine. What I mean is, the eſtabliſhment of Parochial Friendly Societies, conſiſting chiefly of handicraftſmen and labourers. Theſe, it is very properly obſerved, 'are founded on one of the wiſeſt maxims in the code of human policy, namely, that it is eaſily in the power of the many to help the few.' This is a ſubject of ſo much real utility and importance, that I will not pretend to ſuppoſe it has always eſcaped your attention. A contribution of two or three pence in the week can be felt by no man who earns common wages; but the relief that five, or poſſibly ſeven ſhillings in the week, affords to the ſick, the lame and the aged, becomes very comfortable. This ſyſtem, operating in favour of œconomy and induſtry, is completely oppoſite, in its effects, to rates and aſſeſſments. The latter are only ſubmitted to as a neceſſary evil: the former is the object of choice and approbation, and ſhould be cheriſhed and ſupported by every one wiſhing well to his country.

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I will not inſiſt farther on this ſubject at preſent, but would take leave to refer inquirers to the papers publiſhed by the Bath and Weſt of England Society, of which I have occaſionally peruſed the greater part of the firſt eight volumes. I may add, that premiums have been long ſince given by that reſpectable Society for encouragement of theſe inſtitutions.

I am much diſpoſed to attempt the inſtitution of a ſociety of this kind in the pariſh where I at preſent live, but would be happy to read your ſentiments before moving in the undertaking. I hope you will call the attention of the public to this ſubject, in which no claſs of the community are more directly intereſted than proprietors of lands, as it tends to relieve their property from the moſt conſiderable incumbrance, and to promote that induſtry and frugality, in the happy effects of which they will evidently have ſo large a ſhare. Suppoſing you were to favour the public with a few plain regulations for theſe ſocieties, and communicate the moſt neceſſary information, I dare ſay it would be productive of beneficial conſequences. The ſanction of the Farmer's Magazine is become no trifle, and I flatter myſelf it will continue more and more reſpectable.

Having very lately received your laſt Number, with great pleaſure I ſeize this opportunity of expreſſing my warmeſt applauſe of the elegant communication which begins the Number, entitled, 'Conſiderations on regulating the Value of Labour.' Were ſuch ſentiments as therein diſplayed, general amongſt landlords and men of conſequence in the country, there would be fewer complaints of the irkſomeneſs and inconveniences of the ſituation of the tenantry, or of the obdurate pride and petty tyranny of ſome of our great men.

With much reſpect and eſteem I ſhall venture to ſubſcribe myſelf

Wigtonſhire, Oct. 1804. AGRICOLA JUNIOR.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Engliſh Poor's Laws.

SIR,

WITHOUT entering much into the details of the management of particular pariſhes, I ſhall make a few curſory, but, I hope, well-founded remarks, on the ſubject in general, as a municipal regulation. The tax for the expreſs purpoſe is collected by the overſeers of the poor, after a certain ratio or pound rate, on the average value of the tenure; an impoſt, now amounting, in ſome years,

years, to a conſiderable proportion of the rent, inſomuch as to beat extremely hard on the middling and lower claſſes of occupants of land, many of whom, in this pariſh, are not better provided for than ſome of thoſe families which receive relief from the poor's rate, were ſuch families ſufficiently induſtrious and careful. But the certainty of relief held out by the poor's rate fund, by removing far from a man's eyes the proſpect of famine to his family, baniſhes all ſtimulus to exertion of induſtry and œconomy. For why ſhould *he* deny himſelf the dear pleaſures of the village alehouſe, whoſe wife and children will ultimately be provided for, independently of his labour and care, and at the coſt of other people, whatever may be his own extravagance and exceſs there? Inſtances of this ſort may be adduced, that are truly diſguſting. I have paid, during my reſidence in a neighbouring pariſh, to a perſon who worked for me as a maſon, upwards of 100l. in the courſe of a ſummer, and, at the very commencement of the winter, I was a witneſs to his wife's obtaining from a neighbouring Magiſtrate, relief of not leſs than 9s. per week, to be paid her out of the poor's rate, when it might have been proved, that the money of the huſband's earnings had been diſſipated in the moſt extravagant way.

The ſyſtem is fundamentally bad, and generally the moſt profligate are the ſole gainers by it: conſequently, holding out ſuch funds almoſt indiſcriminately, muſt have a tendency to produce much immorality, and heedleſsneſs of the future, among the poor themſelves; thereby fruſtrating every good intention of the law, and creating poverty, the very evil intended to be remedied by it. Doubtleſs the widow, the diſabled and deſtitute, muſt be provided for; but the beſt mean of doing it, is well worth the conſideration of every one who is concerned in the ſupport of good order, and attentive to the wants and neceſſities of others.

It may not be unreaſonable to inquire a little into the cauſe and origin of the Engliſh poor's laws, as they now ſtand; for they were enacted in the reign of Elizabeth, only as a partial remedy for the previous embezzlement of the poor's fund among other public funds, by her rapacious and tyrannical father Henry VIII., at the time of what is uſually ſtyled the Reformation. Before that period, the poor were relieved out of a certain proportion of the parochial tenths or tithes, ſet apart for that purpoſe, as a contingency of their grant. Theſe were originally the effects of voluntary contribution, which, it may eaſily be proved, had for its object the proviſion for the poor, as well as for the clergy, &c. &c. They were greedily ſeized by the tyrant, and doled out again to his courtiers, his nobility and gentry, as a bribe for their ſupport of him againſt the Pope; who very juſtly threatened him with

with the utmoſt vengeance of the Church, for his ſcandalous and atrocious conduct in regard to his wives, &c. &c.—a vengeance not to be deſpiſed in thoſe days, when its influence on the multitude was ſo extenſive and powerful.

The inconvenience of theſe baſe and felonious colluſions was ſoon felt by the poor and middle claſſes of the people, who became loudly clamorous on the ſcore of their grievances and privations. The expedient of the poor's law was therefore adopted in the reign of Queen Elizabeth; the poor having, in the *interim*, ſeverely felt the loſs of that aſſiſtance they were wont to receive from the religious houſes, as their own rightful ſhare of the tithes before their ſuppreſſion; and before ſo great a proportion of the latter became the *peculium* of the nobility and gentry, by impropriation, patronage, &c. &c.

What elſe but bitter waters could proceed from ſo muddy a fountain? However, though various attempts have been made to reform this code—to aboliſh it altogether, or partially—particularly by the excellent plan of Mr Burgeſs, in which he propoſed that pariſhes and townſhips ſhould be aſſociated, in the manner of friendly clubs or ſocieties reſpectively, to be ſubſcribed for by both rich and poor in time of health—every attempt towards an alteration has been ſteadily oppoſed by the magiſtrates, whoſe motive has been inſcrutable, unleſs it be that they are ſo pleaſed with the privilege of being kings of the beggars, that they cannot conſent to an abdication: for, under the poor's laws, their power is nearly abſolute, to the great diſtreſs of many of the moſt reputable occupants of lands.

What I can at preſent make out of the particulars of our pariſh, amounts to this: From about 1000 acres of land, about 150l. *per annum*, or 3s. 6d. per acre, is at preſent collected by the overſeer of the poor, who diſtributes it among nearly twenty objects, as he thinks fit; the amount is ſometimes much greater, and in ſome other pariſhes, many times over that ſum per acre. Theſe objects conſiſt of widows, perſons incapable of labour, militiamens' families, and baſtard children: for part of this fund is worthily held out and applied by order of the magiſtrates for the ſupport and encouragement of baſtardy, by making the father of the child liable to a part of maintenance only, the pariſh to the reſt; ſo that, in this reſpect, it frequently happens, that occupiers of ſmall portions of land, who are with great difficulty enabled to bring up their own *legitimate offspring*, are obliged to contribute towards the ſupport of other mens' *baſtards*. Many militiamens' relations are able enough to keep their families from the pariſh, if they would exert themſelves accordingly; but the ſpirit of independence, and former laudable reluctance in applying

ing to the pariſh fund, are nearly worn out: and this mode of relief is now claimed, or rather ſeized by them as their own peculiar property. One married man in the pariſh has ſeveral baſtards, and I much doubt whether he pays for the maintenance of any one of them.

In ſhort, the effect of the poor's laws as they now ſtand, by taking away from individual man, who, by the law of nature, was condemned to earn his 'bread by the ſweat of his brow,' all ſort of reſponſibility for the conſequences of his own never failing endeavours to increaſe and multiply his ſpecies, gives exiſtence to a vicious and abortive population; creates the evils they were intended to mitigate; and threatens to tear up the foundations of morality and property itſelf. The burden of the good old pauper ſong, written ſoon after the enactment of laws, apparently ſo much in his favour, is tolerably deſcriptive of their genuine ſpirit; which, as far as my recollection ſerves me, is as follows:

'Come let us drink, ſing, and be merry,
The pariſh is bound to maintain us.'

Nevertheleſs, as good ſubjects and Chriſtians, we are in ſome degree bound to ſubmit with patience to this and other abuſes and grievances, of which, though the means of redreſs are obvious and ſafe, it would now be extremely improper to think of reforming. Yet that for ever muſt remain to be the only mode of averting thoſe extremes, which, by the experience of all ages and countries, inevitably tend to the confuſion and deſtruction of all human communities.

The above mentioned expences are very much enhanced in times of ſcarcity and dearth; alſo, too frequently from moſt expenſive litigations at law, on diſputed caſes of ſettlement, &c.

I am yours, W. P.

FOR THE FARMER'S MAGAZINE.

Anſwer to Mago's Query, p. 292, concerning the Advantage of Enclofing Corn Land. By Lieutenant-Colonel Vavaſour.

I HAVE obſerved in your very uſeful and entertaining Publication, the Farmer's Magazine, a query ſigned Mago, on the expediency of encloſing lands adapted to the growth of corn. Although the encloſing the commons and common fields of England is certainly of great public and private benefit, I am much inclined to think, that if agriculture were carried to that degree of perfection of which it is capable, all interior fences might be diſpenſed with.

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If this opinion be well-founded, of courſe, the firſt coſt of making ſubdiviſion fences, together with their conſtant repairs, and the loſs of land they occaſion, will be ſo much gained to the proprietor of the eſtate.

In Flanders, where the land produces more for the ſupport of both man and beaſt, than any part of Europe I am acquainted with, the enclоſures indeed are very ſmall, and are ſurrounded by borders, which are lower than the reſt of the field: Theſe borders are planted with poplars, and other quick growing trees, and a ditch is cut along the middle; but theſe ditches are intended rather as drains, than as fences to confine cattle. In what is called the field gardening huſbandry, near London, the different crops are divided by narrow paths. This is ſaid alſo to be the practice in China.

Whenever the greateſt poſſible produce is required from land, it is neceſſary that no live ſtock be ſuffered to depaſture in the field; but that the cattle crops be cut and carried to them in ſome confined place. If ſheep are kept on clover, vetches, or other ſummer food, they may be confined by hurdles or nets, as is practiſed when at turnips. It will be remembered, that this ſyſtem is propoſed for land adapted to the growth of corn; and which may, by theſe means, be made to produce more for the ſupport of live ſtock, than if the whole had been in graſs, excluſive of the grain which will be ſent to market.

I am fully convinced, that large farms are in general the beſt cultivated; yet if the capital now expended on an extenſive tract of land, were employed on a farm of good arable land, of far leſs extent, but cultivated in a garden-like manner, and made to produce alternate corn and cattle crops, the latter to be conſumed in the moſt economical manner, conſequently an immenſe quantity of manure made—if ſuch a ſyſtem as this were purſued, a vaſt additional produce would be brought to market, and a greater clear profit would remain to the cultivator of a ſmall farm, than is at preſent generally made by the occupier of ſeveral hundred acres.

If the foregoing premiſes be well-founded, it muſt follow that, on land adapted to the growth of corn, interior fences are unneceſſary. But, according to the ſyſtem of agriculture at preſent generally practiſed in this kingdom, they become unavoidable, as no tenant could be found who would give a fair rent for a farm, unleſs it was divided into moderate ſized enclоſures. To cultivate a country in the moſt garden-like manner, with a view to the ſupport of the greateſt population, I believe it will be unneceſſary to divide farms into ſeparate enclоſures by interior fences.

Milbourn-hall, Yorkſhire.

TO

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Sir,

I DO myself the pleasure of transmitting to you an *account of the drilled turnip husbandry of Berwickshire*, drawn up in 1797, at the desire of the Earl of Lauderdale, for the use of his Grace the Duke of Bedford, by Mr Low at Woodend, a gentleman well known to a great number of your readers, and one who entertains more correct views of rural economy in all its branches, than almost any person of his profession. Trusting it may prove advantageous to farming people in many districts, I recommend its insertion in your Magazine, though it may not be improper to add, that a few copies were printed by one of the author's acquaintances in Edinburgh, and circulated among his particular friends. I am, Sir, yours, &c.

A FRIEND TO IMPROVEMENTS.

Method of Cultivating and Raising Turnips in Drills, as practised in Berwickshire and the Neighbouring Counties.

General History.—The practice of sowing field turnips in drills has prevailed in Berwickshire these forty-five years past; though, from small beginnings, the culture of this useful root has increased so much, and been so extensive, that the practice has been communicated to all the neighbouring counties, and the ploughmen and overseers, who have been long accustomed to migrate, have in some degree extended it all over Scotland: And wherever it has been practised and well understood, it has got a decided preference to the broad-cast husbandry, for the following among many other obvious reasons.

1. The land under a drilled crop, which admits the plough between the drills, is better cleaned, and cultivated more like land under fallow than under crop.

2. The hand-hoeing of the drill crop is much easier performed than that of the broad-cast crop, the former being done by women and children, who can learn their work in a day, whereas the latter requires gardeners, or expert and long experienced hand-hoers.

3. The earth is generally laid up to the drill turnips by the plough, and on this account they are better covered, and consequently better preserved in case of severe frosts, which often spoil the crop, especially in high situations. Besides this, the drilled turnips are very easily got at in time of deep snow, and are in that situation taken up with less loss than the broad-cast crop.

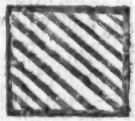
4. The drilled crop is generally better than the broad-cast crop, and will weigh more per acre, seldom less, except where the land is very fine, in good heart, clean and dry: Such only is in preparation for a broad-cast crop, whereas a drilled crop is often raised on land very coarse and foul.

5. By drilling wet land, the tops of the drills or small ridges are in some degree laid dry, and a good crop is often raised on land so wet, that the broad-cast crop would have no chance to be worth working.

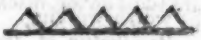
Preparation of the Land.—The land intended for turnips, which is generally such as has carried a crop of wheat or oats, is first ploughed after harvest: it is again cross-ploughed in March or April, if the season will allow: it is next broken and pulverized with the break or harrows, and all the weeds and stones are carefully gathered by women and children, and carted off into heaps on the sides of the fields. The operations of ploughing, harrowing, and gathering weeds, couch grass, &c. are not given up till the land is thoroughly cleaned. If the land requires liming, the lime has either been spread on the stubble after harvest, or it is laid up in large heaps in or near the field, and covered with turf or straw, to keep it dry, and from cakeing, during winter: it is spread upon the land, previously cleaned for its reception, and sometimes ploughed, but oftener harrowed in; and thereafter the land is ready for ridging or drilling up, dunging and sowing. It forwards the work considerably, when the dung is carried out from the dung-yards in winter, and laid up in middens on the fields. If these middens are not trodden upon, the rotting of the dung is much forwarded. Sometimes, where the land is very clean, and dung to be had in plenty, it is spread on the stubble land, and ploughed down with the first ploughing the land gets after harvest.

Forming the Drills or Ridges.—Where the ground is not well pulverized, but remains *rough* and *cleddy*, the drills are formed with the common swing-plough drawn by two horses, which lays together three or four rinds or furrows for one drill. But the most common and expeditious method of forming these drills is by a double mould boarded plough, which has the boards hung on the sheath with hinges, and can be set wider and narrower at pleasure. It is also drawn by two horses yoked abreast, and forms both sides of the drill at once. The width of the drills is generally from twenty-seven to thirty-six inches. And when the ridges are not much rounded, the drills are not laid in

the course of them, which is generally parallel to one or other of the sides of the field, but are angled a little, as on the margin, for the purpose of having the dung better mixed with the soil, when it comes to be ploughed up into the ordinary sized ridges for grain, after the turnips are are off.



When the field is drilled up or formed into narrow ridges or grooves, a section of them appears thus:



Dunging and covering the Dung.—These operations go hand in hand, and follow one another as fast as can be done, always taking care to be busy in dry weather. The dung, at the rate of from ten to twenty double horse carts to the acre, is carted to the drills, and laid in small heaps in every 3d, 4th, 5th, or 6th one, at the distance of from eight to ten feet. It is immediately spread by careful hands into the furrows; and when a few of the drills or furrows are dunged from end to end, the double boarded plough is again used to split the drills and cover the dung, which it does at once going about, leaving the top of the drills or ridges immediately above the dung thus:

Sowing the Seed.—As it is of consequence to cover the dung quickly, in order to preserve the sap in it, so is it to sow the seed immediately, while there is moisture in the ground from its being newly turned up.

The ridging plough generally leaves the tops of the drills too high and narrow for the reception of the seed. Where the dung is well rotted, and the soil a little stiff, the drills are somewhat levelled before sowing, by a light harrow passing once or twice over them, leaving them thus:

But the most common way of flattening them is to use a light wooden roller of about four and a half feet long, drawn by one horse. He walks in the furrow, and the roller presses down and spreads or flattens the tops of two of the ridges or drills at once. To the frame of this roller is tied by a rope or light chain, the drill or sowing plough, of which there are various kinds. The simplest is generally the best. It is a cylinder or small barrel of white iron or copper, mounted on an axle with one or two wheels, oftener upon two than one. It is perforated with holes at equal distances, and as it turns round with the wheels, the seed falls equally out, and exactly in a straight line. This cylinder and wheels are fixed to a light frame-work, which has two stilts, and is kept on the top of the drill or ridge by a man or a boy, who walks behind as if managing a plough. Before

fore the cylinder there is fixed to the frame-work a kind of coulter, which makes a ſmall rut for the ſeed, and behind is fixed a rake with two or three teeth, which mixes the ſeed dropped with the ſoil; and as the horſe returns by the next furrow, to right or left, the oppoſite end of the roller rolls the ridge ſown, and compreſſes the top of the ridge on which the ſowing machine follows. When it is neceſſary to do much work at a time, there are two ſowing machines which follow the ſame roller, and ſow two ridges at once; and a ſecond roller follows to roll in the ſeed. Sometimes the roller uſed for the ſeed is a kind of broad low wheel attached to the machine, and rolls only on the track or rut where the ſeed is ſown. On fine land, well prepared with rotten dung, or on ſuch land as will grow turnips without dung, and when it is conſidered as unneceſſary to horſe-hoe, there is a drill uſed which is attached to the common ſwing-plough, and, one plough following another, the turnip ſeed is ſown in rows at a regulated diſtance and depth. This drill machine is made by the patentee in Yorkſhire.

Choice and Quantity of Seed, &c.—The ſeed for the moſt part is brought from England, and retailed to the farmers by ſhop-keepers. There are ſome growers of ſeed in the country, who pretend to take great care in ſelecting the beſt kinds from their fields, which only are allowed to run to ſeed. It is reckoned beſt when the turnips intended for ſeed are tranſplanted early in the ſpring, before ſhooting. The round white, the green topt, the red topt, and the high round bottle topt, are all uſed, and very often mixed in the ſame field. When cattle or ſheep have a choice, they generally prefer the other kinds to the red; hence it is concluded, that the red does not ſeed ſo readily as the other kinds; but they are cultivated in conſiderable quantities, becauſe they ſtand the winter beſt. Two pounds weight of ſeed is generally ſown on an acre; a leſs quantity is ſufficient; but the ſaving of ſeed is of very little importance in this caſe, as it ſeldom ſells above 6d. per pound, and when thick ſown, the plants puſh beſt at firſt, and are leſs liable to be all deſtroyed by the fly, which ſometimes happens when very thin ſown.

The Swediſh turnip has been tried, but is not in general uſe. They anſwer well with tranſplanting when young, and therefore are ſometimes ſown in ſmall quantities, for the purpoſe of being tranſplanted into blanks in the common turnip fields. They are known to be very hardy, and can be preſerved till late in the ſpring, on which account they were (when firſt introduced) thought to be of great uſe, as coming in for proper food for young ſtock, between the failing of the common crop and

the ſpringing of graſs; but it has been diſcovered that the ſkin or rind is ſo thick and hard, as to ſhake out the teeth of young ſtock, eſpecially of hogs (young ſheep), and therefore they are not much cultivated by the farmers.

Time of Sowing.—Drilling up the land, dunging and ſowing, commences about the firſt of June, and is continued to the middle of July. The crops ſown before or after theſe periods, in Scotland, ſeldom turn to any account. From the 10th to the 20th of June, is reckoned the very beſt time for ſowing.

Horſe-hoeing.—When the turnip plants are from one to three or four inches high, or when the weeds begin to appear, a ſmall light ſwing plough of the common form, known in Scotland by the name of Small's plough, drawn by one horſe, goes along one ſide of the ridge or drill, and turns off the earth from the young plants, and returns by the other ſide for the ſame purpoſe, leaving the field in appearance thus:

In place of the light common plough, ſometimes the earth is turned off from each ſide of the young plants by a machine, mounted with two coulters, which cut from both ſides at once, and on ſmooth land does the work equally well with the plough, and more expeditiouſly.

Hand-hoeing.—Two or three days after the earth is turned off from the plants, the hoers go to work, uſing a hoe from five to eight inches broad, and, at one ſtroke acroſs the ridge, cut the weeds, and leave the turnips ſufficiently thinned. This work coſts about 2s. per acre.

After being thus horſe and hand-hoed, the field remains in the ſame ſtate ten or fifteen days, and if the weeds grow faſt, the ſame operation is repeated. The whole operation, both of horſe and hand-hoeing, under ordinary circumſtances, does not amount to above 7s. per acre.

Furrowing up the Turnips.—The turnips being clean hoed, and beginning to bottle, the earth lying between the rows, which has been turned off, as above mentioned, from both ſides of the plants, is again laid up to them by a light double boarded plough, drawn by one horſe. The operation is then finiſhed, and the field or drills left in appearance thus:

Sometimes it happens that weeds, ſuch as wild muſtard, &c. grow up, and appear among the turnips after this laſt operation; in which caſe they are pulled up by the hands of women or children, ſo that by Auguſt nothing is ſeen but the tops or ſhaws of the turnips, covering the field thus:

Drawing

Drawing, or Eating off the Turnips.—By the end of October, or 1st of November, the turnips are drawn for feeding black cattle, tied up in the sheds or stables, or going at large in straw yards, or laid out to them in dry grass fields; or they are ate on the field by sheep, kept together on the same spot by flakes or hurdles, which are shifted once a week. More generally now, the one half, that is, five or six rows about, is drawn for black cattle, and the other half remains to be ate on the ground by sheep, either ewes or wedders, which go to market from 1st March to the 1st May, and sell for from 45s. to 70s. each. A great proportion of the crop, raised by breeders, is consumed by young stock (sheep), which feed on them from 1st November to the 1st May, and are thereby raised to a great size, and kept in good order. They go off then, in the middle of May or 1st of June, to the Yorkshire dealers, at from 30s. to 40s. a head.

Value of the Crop of Turnips.—Many farmers, who are neither breeders nor feeders of stock, cultivate and raise fields of turnips. These they let to feeders, or breeders of stock, to be ate off, as may be stipulated, in a given time, either with black cattle or sheep. Formerly (about ten years ago) the price ran from 2l. to 3l. per acre. Of late years, owing to the increasing value of stock, the price has run from 4l. to 7l. per acre. An acre of good turnips will maintain and feed an ox of 60 or 70 stones for five months, or ten sheep for the same period. The ox's price in ordinary years will advance by this feeding 5l. and the sheep's 10s. There is more trouble in feeding with black cattle than sheep, but the additional quantity of dung made compensates this trouble. It is not uncommon to find turnips, in drills, on fresh new land, that will weigh from 20 to 32 lib. English; but a size under 10 lib. is the most common crop.

Management of the Land after the Turnip Crop.—On most of the dry lands along the Tweed and sea-coast, where turnips are raised and ate off by sheep, it is common to sow wheat upon such fields as are cleared, by the 1st or middle of March. Those cleared from the middle of March to the middle of April, are sown with early or Dutch oats. After that, where turnips remain, the land is sown with barley. All these crops generally get only one ploughing, and are sown with clover seeds, 12 lib. to the acre, half red, half white, with a bushel of ryegrass, if the field is to remain in grass longer than one year; but if intended to remain only one year in grass, the whole seed is broad or red clover.

Rotation of Crops.—Upon the fine rich turnip lands the rotation of crops generally is,

1. Drilled turnips.
2. Wheat, with clover seeds.

3. Clover, cut green for horſes, or made into hay.
4. Wheat.

Or, 1. Turnips.
2. Oats, or Barley with clover ſeeds.
3. Clover cut green, or for hay.
4. Oats.

Or, ſometimes, though reckoned worſe farming,
1. Turnips.
2. Wheat.
3. Oats.

Lands that will bear any of theſe three rotations are reckoned the very beſt, and will pay the moſt rent. From 30s. to 45s. per acre is not an uncommon rent for ſuch lands.

Lands of a worſe quality, or in a high climate, which is the general caſt of the county of Berwick, are laid to graſs after the turnip crop, and continued in paſture for four or five years. And the lands ſtill more high and barren, are ſometimes ploughed out of lea, or barren graſs, or heath, and fallowed and limed the year previous to their bearing a crop of turnips. This mode of preparation is reckoned excellent; and it is obſervable, that lands of theſe laſt claſſes, managed in this way, will bear as weighty a crop of turnips as the better lands; but they do not fatten ſo well, nor maintain ſo much ſtock.

Houſing or Stacking of Turnips.—In Scotland, the winter froſts are ſometimes very ſevere, and continue for a month or ſix weeks. During this time, though the turnips may be pulled, or rather cut up with hoes, yet they are ſo hard as not to be ate by the ſtock but with the greateſt difficulty, and therefore the ſtock loſes fleſh. To guard againſt this unfavourable ſeaſon, the expert and diligent feeder pulls up a quantity of the turnip in November, and, after cutting off the tops and roots, ſtacks them up, or houſes them near the feeding ſheds or field, and covers them well with ſtraw. They are then in good order to be dealt out to the ſtock in time of hard froſt or deep ſnow.

Removing Turnips from Wet Land.—The rage for raiſing turnips in Berwickſhire is ſo great as to induce the farmers to ſow them ſometimes on land ſo wet and ſpongy as not to bear the ſheeps' feet to eat, far leſs the cart wheels to carry them off. In this caſe, it is conſidered to be the beſt way to carry them off in creels (or large baſkets faſtened to a ſaddle) on horſeback. The horſe walks in the furrow between the rows of turnip without poaching the land. Theſe creels or baſkets open at bottom to let out the turnips when carried to the place where they are wanted. A horſe will carry at a time from three to four hundred weight with eaſe.

Concluſion.

Concluſion.—It is to the drilled turnip huſbandry, added to the mixt huſbandry (or that of having half of the farms in tillage and half in paſture graſs, with power to ſhift), that Berwickſhire is indebted for the high rank it holds of being one of the firſt and beſt cultivated counties (under ſimilar circumſtances) in the kingdom, and for the extenſive demand for its breed of black cattle and ſheep; which has filled the pockets of many of the farmers with well-earned wealth, and, in many caſes, has tripled, quadrupled, and quintupled the landlord's rent. It is perhaps neceſſary to add, that much of the land being allowed to lye for years in paſture graſs, it acquires a ſtiffneſs on the ſurface, from the graſs roots, that cannot be reduced by the breaking-up crop, which is generally oats ſown after one ploughing: therefore the drill turnip huſbandry becomes more neceſſary here than in other counties, where almoſt the whole lands are conſtantly kept under crop, and where no graſs of value is to be found above one year old.

Wood-End, by Dunſe, December 1797. ALEX. LOW.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Directions where Graduated Spring Steelyards may be procured; with Remarks on Mr Ducket's Skim-Plough.

SIR,

The *Yorkſhire Farmer*, page 523, vol. IV. of your Magazine may obtain the *Graduated Spring Steelyards* that he inquires after, by applying to Mr Salmon, Woburn Park, Bedfordſhire, where alſo are made the machines for weighing live ſtock, on the ſame principles as thoſe uſed annually at Woburn ſheep-ſhearing to determine the prizes.

The price of the ſpring ſteelyard is five guineas; of the cattle weighing machine I cannot ſay, but think about the ſame price. With this graduated ſpring ſteelyard, the force required to work every ſeparate part of the Duke of Bedford's large thraſhing machine has been meaſured, which has diſcovered ſome very important facts in mechanics.

In A. Young's *Annals of Agriculture*, No. 248, page 540, the writer who ſigns *Montagu Burgoyne*, in deſcribing the ploughing match at Harlow, July 1. 1804, ſtates as follows:

'It appeared to me to be as neceſſary to aſcertain the ſuperiority of the plough as of the ploughman. A ſilver medal was for this reaſon given to the manufacturer or owner of the beſt plough, which did its buſineſs the beſt with the *leaſt force*. A good deal of difficulty occurred in this deciſion, for every method hitherto

thought of to aſcertain the force required is very inſufficient. 'We had recourſe to a ſpring dial; but we found it ſo much affected by the ſudden jerks of the horſes, that it proved nothing, and impeded the regular motion of the plough.'

The writer of this paragraph has convicted himſelf by ſuch an aſſertion; becauſe, had this *ſpring dial* not been affected by the ſudden jerks of the horſes, it is plain it could not have been accurate; for it muſt be acknowledged that thoſe ſudden jerks of the horſes were owing to a greater exertion for a ſhort time, and that if the ſpring dial had not diſcovered the force of this exertion it would have been inaccurate and of little uſe.

Every extra obſtacle that the plough meets with cauſes it to draw harder, and the greater the number of theſe obſtacles the more general force is required; all of which ought to be taken into the account in meaſuring the force exerted. Every different velocity of the horſes will make a difference in the actual force neceſſary to be applied to the plough. All other things being the ſame, the ſlower the pace of the horſes the leſs force will be required.

The weight that the holder of the plough applies on the handles muſt make a material difference on the draught of the horſes; and yet it makes part of their work, although it is no part of ploughing. I have known this unneceſſary weight on the plough-tail cauſe half the work of the horſes.

It is very fortunate for Mr Ducket's ſkim-plough that this (whim) dial was thrown aſide as uſeleſs; becauſe it is plain to every one, that if the *force* was taken into the account, Mr Ducket's plough muſt ſtand low in the liſt; and I can aſſure M. Burgoyne, that although the ſpring ſteelyards were uſed at the Woburn ploughing match, and Mr Ducket had a prize, that, in the deciſion, the *force* was not taken into the account, as it made no part of the conditions of the premium.

Mr Ducket's plough is certainly a very valuable inſtrument for covering the turf, &c. which certainly cannot be done without conſiderable expence of power. Neither will it be believed by any practical farmer that it will 'ſo completely plough, in any crop, *three feet* high, that not a blade ſhall appear above ground!'

I have no wiſh to detract from the merits of any inſtrument, however ſmall; at the ſame time I eſteem it a duty to correct any falſe impreſſions that may be made on the public mind, either by ignorance or deſign. I am, Sir, your moſt obedient ſervant,

B. Bevan.

Leighton-Beds, September 19. 1804.

BRANCH

BRANCH II.

AGRICULTURAL INTELLIGENCE.

WHEN our laſt Number went to preſs, the weather, generally ſpeaking, was dry over the whole iſland, and ſanguine expectations were entertained, that a full and abundant crop of grain would be gained by the huſbandman. Before publication, however, a great, and, in many inſtances, a fatal change occurred, which, at that critical period, proved very injurious to the corn fields, particularly thoſe occupied by wheat. In England, the rains ſet in with ſeverity ſoon after the middle of July; conſequently the after loſs was greater than that felt in Scotland, where the weather remained longer unaltered. In the firſt week of Auguſt much rain fell in every direction; and, for more than two weeks thereafter, the weather continued wet and unſettled, preventing every kind of grain, oats excepted, from filling and ripening with vigour and ſucceſs, and occaſioning that baneful diſorder, *mildew*, upon many fields of wheat. Independent of theſe rains, there was good reaſon for believing, that the wheat crop of Scotland would have been more prolific than any one for many years paſt. Even under the inauſpicious circumſtances now detailed, it may be eſtimated as fully equal to an average, though much of the grain is of inferior quality, and, in ſome diſtricts, not a little ſmutted.

Notwithſtanding that ſeveral of the grain crops were greatly injured by exceſſive wetneſs at the period mentioned, yet other articles, ſuch as oats, graſs, turnips, and potatoes, were conſiderably benefited thereby. Oats are a kind of aquatic, and rarely ſuffer from moiſture, unleſs where lodged; and leguminous crops, peas excepted, are ſeldom good in a dry ſeaſon. Indeed, turnips and clovers received much advantage from the Lammas rains; many fields of both being completely at a ſtand when the quarter commenced.

From the various accounts tranſmitted to us, it appears that, in England, wheat turns out a ſhort crop, and that the quality, in ſeveral caſes, is of a very inferior deſcription. This is evident, from the average price of flour approaching ſo near to that of wheat; a circumſtance which cannot happen, unleſs when the grain is materially defective. Perhaps we are not far from the mark, when we rate the deficiency of produce at one fourth, compared with that of the preceding year. In Scotland, though

though the grain is, in few inſtances, ſo plump and well coloured as laſt ſeaſon, yet the return per acre is much nearer to the ordinary produce, than among our ſouthern neighbours; for, in Scotland, the rains were later, not ſo heavy, nor of ſo long continuation as with them. Had they happened earlier, when the grain was in an embryo ſtate, it is very probable, that qualities would not have been better than they were in 1799. At one period, the like apprehenſions were entertained, as were realized in that fatal year; but theſe were ſoon removed, by the uncommon fine weather that followed, by which the quality was eminently improved.

Barley, ſo far as cultivated, may be regarded as an average crop; but then the breadth of ground occupied by this grain was much narrowed this ſeaſon. The prices of laſt year, owing to the exorbitant tax impoſed upon malt, were ſo low that the grower was diſcouraged from raiſing it. This was conſtantly predicted by us; and indeed the ſpirit of prophecy was not required to form ſuch a prediction. Barley is an article rarely imported; perhaps it is not raiſed extenſively on the Continent, therefore a ſhort crop of it will be more difficult to remedy than that of any other grain.

Oats, according to our information, promiſe to be as plentiful as laſt year, though, no doubt, the deficiency of barley will throw a greater demand for them into the market. Laſt year, much barley was uſed for horſe feed; a practice hardly to be expected under preſent circumſtances, therefore the demand for oats muſt be proportionably increaſed.

Peas and beans, this year, are by moſt people conſidered as ſuperior to any crops got ſince 1798. This is rather remarkable when the adverſe weather in ſpring is remembered, and can only be accounted for from the fine weather in the blooming and ripening ſeaſons, both being remarkably favourable.

Thus we have given a conciſe view of the ſeveral corn crops, collected from an extenſive correſpondence over the whole iſland. In ſome diſtricts, the ſcale may be lower or higher than we have marked it; but, taking matters as a whole, we have reaſon to believe that our account, in ſubſtance, is not materially wide of the truth. In former times, a conſiderable period elapſed before the general ſituation of the crop could be aſcertained; but now, when agriculturiſts maintain a correſpondence nearly as regular as that carried on by mercantile people, the proſperity and adverſity of rural concerns can be eſtimated with facility.

From the foregoing ſtatement, the late advance upon the prices of grain may be ſatisfactorily explained. Indeed the riſe has been general over the whole iſland, though full as great in the metro-

polis

polis as in the country diſtricts. Whether matters have reached their level it would be difficult to ſay, though there is reaſon to believe that they have not yet gone ſo far. The new corn bill has been conſidered as partly cauſing a riſe; but, in our humble opinion, without the ſmalleſt foundation. The bill is not yet come into action, therefore cannot have ſtopped the importation of a ſingle buſhel. Perhaps the proſpect of its operation rather quickened importation, by cauſing orders to be ſent out which might otherwiſe have been poſtponed. The prices of wheat, barley and oats are greatly above the rates fixed on by the new bill, therefore it is plain that the like advance would have happened, even had the Legiſlature rejected it. We are none of thoſe who place much dependence upon corn laws for regulating the market; indeed their utility and effect are both problematical circumſtances, the markets being entirely regulated by the goodneſs or badneſs of the crop. We have always contended for protecting duties in favour of Britiſh huſbandmen, ſo as they might not be underſold in their own market by foreigners; and had duties been impoſed upon importation equal to the difference betwixt the value of labour and amount of taxes in Britain and thoſe of foreign countries, in our opinion no injury would have been received from a total abrogation of the corn laws. Exportation of grain from Britain is now out of the queſtion. We have conſumpt at home for every diſpoſeable buſhel; and, according to our views, were a ſurplus to remain, it would afford ſure proof that the proſperity of the country was on the wane—that trade was decreaſing, and that population was either reduced, or the people left without the means of enjoying their uſual comforts.

The butcher market has continued nearly in an equable ſtate through the quarter, any little difference being on the ſide of declenſion. Lean ſtock, eſpecially ſheep, ſeemed at one time to be on the fall; but, of late, prices appear to be more ſtationary. Mutton has, for ſeveral months, been from 10 to 15 *per cent.* cheaper than beef, occaſioned, in a great meaſure, by the immenſe crop of lambs brought to market laſt ſummer. High as grain may be reckoned, butcher meat, if we take the old ſtandard as a rule, is ſtill higher. It is more than twice the price of bread, and at this time there is ſmall proſpect that prices will bear greater affinity.

So far as we can learn, every exertion is making by huſbandmen in the wheat diſtricts, to increaſe the culture of that valuable grain; and no object more deſerves their attention, whether conſidered in a public or private point of view. The public have now got ſo largely into the uſe of wheat bread, that an extended culture of the raw article is becoming every day more neceſſary;

ceſſary; and, without diſcuſſing the advantages of other ſyſtems, it may ſafely be admitted as an axiom, that none promiſe greater profit to the cultivator than the one which admits the greateſt ſowing of wheat, it being at the ſame time expreſsly underſtood, that ſoil and climate are calculated for the growth of that grain.

Nov. 1.

Extracts from Private Correspondence.

SCOTLAND.

Selkirk Quarterly Report.

The firſt and ſecond weeks of Auguſt proved very wet, and the natural crops of hay then in hand were much damaged. Harveſt was alſo much retarded thereby, as the corns continued growing when they ought to have been ripening. After all, our grain crops are abundant, and ſeldom, if ever, had a better appearance in the field and ſtack-yard.

There was leſs bear and barley ſown with us this year than formerly, owing to the difficulty experienced laſt year of finding merchants. Oats, which are our principal grain, were in many places lodged by the rains, which gives ſuſpicion that they will not meal ſo well as they did laſt year. Peas were a good crop, and well harveſted, which is every thing with them. Turnips ſuffered much from the ravages of the caterpillar, and are below par. Potatoes are excellent, both in quantity and quality. Some people have thirty-five after one, a produce ſeldom obtained in this part of the country.——*Oct.* 20.

Aberdeenſhire Quarterly Report.

The weather during the harveſt quarter was highly favourable for the ripening, cutting down, and ingathering of the crop; and, except ſome ſlight ſhakes from the equinoctial gales, the work of the ſeaſon was finiſhed in the moſt perfect and agreeable manner. Bear and oats rather exceed an average, both as to quantity and quality. Peas and turnips are generally good, and few years are recollected wherein the potato crop was ſo prolific. The graſs ſeeds ſown laſt ſpring make an excellent appearance, and the paſture fields ſtill afford a good bite. In ſhort, we have cauſe to rejoice that, when engaged in an obſtinate conteſt with a foreign foe, peace and plenty flouriſh at home. Theſe are the greateſt bleſſings that can be enjoyed; and, being furniſhed to us ſo liberally, ought to impreſs the hearts of all with gratitude to the Bountiful Giver.——*Oct.* 21.

Letter from Galloway, October 22.

'Till the 22d of September, we had favourable harveſt weather, at which time ſome winds cauſed a conſiderable ſhake of the grain that remained uncut upon the higher grounds. For three weeks paſt, we have

have had a great deal of rain, which occaſions a conſiderable part of the crop upon the higher grounds to remain ſtill in the fields.

'Wheat and barley are not ſown in large quantities here, and, in general, have yielded but light crops this ſeaſon. Turnips were hurt by the drought and the caterpillar, and, though looking well at preſent, will not prove a heavy crop. Potatoes, owing to the badneſs of weather at ſeed time, and the drought through ſummer, are but indifferent. A conſiderable demand has lately appeared for wintering cattle, though at reduced prices. Sheep have a duller ſale than cattle. At Stranraer market, beef is 4½d. and 5d. Avoirdupois weight; mutton rather lower.

'The grain market is expected to do well; and report ſays, that 40s. may be expected for potato oats, per boll of 12 buſhels; for common oats 36s.; but as our markets do not commence early, little can be ſaid how they may go.

Letter from Falkirk, October 22.

'The harveſt in this diſtrict has been fully three weeks later than laſt year, or than it promiſed about the beginning of Auguſt. This is always an unfavourable circumſtance; and as the operations of that ſeaſon could not be carried on with the ſame celerity as laſt year, theſe, by conſequence, became more expenſive. It is now finiſhed; and I believe the crop was generally ſecured in pretty good condition. The crop is more bulky than laſt year; conſequently, the ſtack yards afford a plentiful appearance. But this is deceptious; for in fact the crop is not really ſuperior, in quantity of grain, to that of laſt year, and, in quality, is by no means equal to it. Harveſt work was carried on at great expence to the farmer, reapers (chiefly women) having for ſome time got two ſhillings a day with victuals; and where money alone was given, which is often the caſe in the immediate neighbourhood of the town, half a crown, and two ſhillings and eightpence. Wheat, till about the beginning of Auguſt, had a flattering appearance, and promiſed a very abundant return. About that time, however, all the weighty fields were lodged, and, from the continued rains, were never able to get up again; they were of courſe greatly injured, and ſmut is more generally complained of than has been the caſe in this diſtrict for ſome years. A moſt culpable, but at the ſame time very general opinion prevails here, that where old wheat is uſed for ſeed, pickling is unneceſſary; but the very great loſſes from ſmut this year, will perhaps cure many of our old-faſhioned farmers of this prejudice, which nothing elſe could have eaſily effected.

Barley is a pretty good crop, but was ſown to much leſs extent than uſual, owing to its having been laſt year a perfect drug. It is now in great demand, at a very advanced price, which no doubt will induce many farmers to cultivate this grain next year to its former extent: indeed the quick demand, and high price this ſeaſon, may probably lead ſome even to exceed their former breadth. If the preſent diſproportionate malt duties ſhould continue, it does not require the gift of prophecy to predict that ſuch a plan will end in diſappointment;

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by reducing the article to its late ſtate in the market. Beans may be reckoned up to an average crop. Oats are bulky, but, from ſome trials at the mill, don't promiſe to meal equal to laſt year. The potatoes are not yet all up, but they are of good quality, and a very abundant crop indeed. Paſtures have been excellent through the whole ſeaſon, and ſtill afford a full bite. Young graſſes look very thriving. Wheat on fallows has been got ſown in fine condition, and a regular healthy braird appears on many fields. Harveſt having been rather backward, and a good deal of rain of late, winter ploughing is not far advanced. Our grain market during the laſt quarter has been looking up, and is expected ſtill to riſe. Old wheat, of good quality, 37s.; New 33s.; Barley 30s.; Beans 21s. Potatoes are not expected to exceed 5s. per boll. This will tend greatly to keep down the price of oat-meal, which is at preſent about 16d. per peck.

Upon the whole, this promiſes to turn out a more favourable year than the laſt for the farmer; for although his crop may not be quite ſo good, the prices are likely to be more in proportion than that difference. Many of his articles were ſold at a rate abſolutely below what they could be produced at laſt year. Our butcher market has fallen conſiderably. Beef in retail, 7d. to 8d.; Mutton 6d. to 7d. per lib. Tron. This is more than might have been expected, conſidering the prices at the laſt tryſt, which fully exceeded the general expectation. On the forenoon of the firſt day of the tryſt, there was rather a dull appearance: this, however, did not laſt long; for buſineſs afterwards became very briſk, and good prices were obtained for almoſt all ſorts of cattle. Before the end of the week the muir was nearly quite cleared.

Roſs-ſhire Quarterly Report.

We had, upon the whole, a ſummer favourable to vegetation; paſture graſs was every where in great abundance; and, now that the corn crops are nearly all harveſted, they will, it is thought, turn out above an average of the laſt three years, wheat excepted, which was much hurt with ruſt, and almoſt all infected with ſmut. Oats and barley promiſe ſuperior ſamples to ordinary years, being in general got into the ſtack-yard in fine condition. Of late, the weather has been unfavourable for the wheat ſeed; and the little corn that remains in the field, in high ſituations, muſt ſuffer by it. Potatoes are an abundant crop; many of them, however, are ſtill in the field, and may ſuffer from wet and froſt, before they can be taken up and ſecured. Turnips are in general a weighty crop. From this circumſtance, and the bulk of ſtraw, winter keep for cattle will be in great plenty. Cattle markets have of late been briſk, and the prices conſiderably advanced, ſince Auguſt laſt. Our corn prices cannot be noted. No wheat nor oats have yet been ſold of this crop, except a little of the former for ſeed. Oat meal ſells from 25s. to 26s. per boll of nine ſtones; Barley from 28s. to 30s. per boll; Beef and mutton from 4d. to 6d. per lib. Dutch weight.

Extract of a Letter from Ayrshire, Oct. 21.

"From the long continued rain through ſpring, to the 16th of June, and the ſubſequent dry weather for ſix or ſeven weeks, the crops in general through this county are but thin, and thought to be below an average. The wheats, upon the whole, are the beſt, though theſe alſo ſuffered in part, from the rainy weather which came on at the beginning of Auguſt. The hay crops were good, and, at the beginning of the ſeaſon, before the ſevere drought ſet in, were ſelling out of the rick as low as from 3½d. to 4d. a ſtone. From the middle of Auguſt to the end of September, the weather continued variable, though upon the whole good; but ſince the beginning of the preſent month it has rained inceſſantly, with the exception of only two complete dry days; that is, there has not been a ſingle day during that time without rain, and that a great deal of it, except two; and the misfortune is, that in many places the crop is not yet cut down, and much of it is ſtanding in the fields that was cut three weeks ago; and it may, for that reaſon, be readily ſuppoſed what condition it muſt be in. The ground being ſo completely drenched with rain, has alſo greatly retarded the ſowing of the wheat, and what is put in the ground is by no means done in the beſt manner. It is thought, too, that the potato crop will be deficient; any experiments that have hitherto been made indicate this, and in an eſpecial manner upon dry ſhore land. The turnip crop, which is now beginning to extend through the county, ſuffered in the ſame manner as in other places by the caterpillar. But this deſtructive inſect, not having generally deſtroyed the heart leaves, as ſoon as the rain came on in the beginning of Auguſt, theſe puſhed forward in an unexpected manner; inſomuch, that many fields that were looked upon as uſeleſs, recovered in a ſurpriſing degree, and the crops will be very tolerable. From theſe combinations of circumſtances, it may be expected that the grain markets will look upwards. They have for ſome weeks been rather on the advance. Meal in Ayr market has for ſome time paſt been at 15d. and 16d. the peck; Wheat about 2l. 14s. and 2l. 16s. the quarter; Oats, with fodder, from a guinea to 2l. 5s. ditto; Potato oats about 3s. or 4s. more. Bear and barley is in ſmall requeſt. Cattle and ſheep have declined 30 and 40 per cent. from what they were about two years ago, though meat in the ſhambles has ſuffered little variation. The property-tax has not yet been exacted in this county, though every body is in daily expectation of the demand being made. The only new aſſeſſment that has taken place is that for the wives and families of the militia, at the rate of 8s. 4d. per 100l. of valuation, to be paid jointly betwixt maſters and tenants, and probably by the tenants alone, where they have bound themſelves to pay all public or parliamentary burdens.—The price of farm labour, both of hired ſervants and day-labourers, as alſo of mechanics, continues as high as ever. Hired ſervants are from 5l. to 9l., or guineas, the half year; day-labourers from 1s. 6d. to 2s. a-day, without victuals; mechanics in proportion. When the high advanced rents,

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ſome double, ſome quadruple, with the exceſſive public burdens, and the great advance upon farm labour, and upon all implements and acceſſories of farming, are conſidered, and compared with the little advance upon every ſpecies of farm produce, it would ſeem aſtoniſhing how the farmer can ſubſiſt; or, as we ſay in Scotland, 'keep the mall in the ſhaft;' and yet the demand for farms is as great as ever. This can only be accounted for by two reaſons: *1ſt*, The confidence which every body has in the good faith, ſtability and ſecurity which they poſſeſs under the Britiſh conſtitution; *2dly*, and principally, from the ſuperior mode of managing farms, which is beginning gradually to take place. While men are allowed to exert their ingenuity, without conſtraint, and to enjoy in perfect ſecurity the fruits of their well-earned labours, they will cheerfully ſubmit to burdens which, in other circumſtances, they could not endure. They then 'ſit under their own vine and their fig-tree,' and they can look up and ſay, 'I am a man.' I would alſo beg leave to obſerve, that the laſt act paſſed for maintaining the national defence, called the Defence Act, gives general ſatisfaction, and is, upon the whole, favourable to agriculture, as it does not attach to the individual, but makes the recruiting and keeping up the national force a public concern, which undoubtedly it ought at all times to be.

Morayſhire Quarterly Report.

Our harveſt is now finiſhed in the beſt condition; the weather is ſtill fine, and a better wheat ſeed time was never known.

The crop bulks well, and will be productive. Wheat varies in quality; but, on the whole, will be middling;—no deliveries nor ſales yet made.

Barley is not plenty. Some contracts are entered into for delivery in March next at 21*s.* per boll. Its culture has this ſeaſon given way to wheat and oats. The latter are a very full crop, and of fine quality. The potato ſort is now getting much into uſe, and promiſe to do remarkably well on rich land. Four Stirlingſhire firlots have this year produced nine ſtone, Amſterdam weight, of meal.

Potatoes are a bulky crop, and of excellent quality; in this county the curl is almoſt unknown.

Turnips are in general middling; ſome fields particularly fine.

Good cattle meet ready ſale at middling prices; while the inferior ſorts, and ſheep of every deſcription, are ſcarcely aſked after.——

22. *October.*

Banffſhire Quarterly Report.

Our harveſt was concluded, with only a few exceptions, about a fortnight ago, and, upon the whole, the weather proved uncommonly favourable. The ſtack-yards, in general, do not preſent any extraordinary bulk; and, in caſe of a hard winter, provender may be in requeſt. But the fine ſunny weather we experienced through the greater

part

part of Auguſt and September, brought the late diſtricts to greater perfection than we ſcarcely remember; and there is every reaſon to think that the crop in general muſt be rather above than below an average. What wheat we have, where free of ſmut, is of excellent quality. The advantage of pickling was apparent in a *patch*, where part had been pickled, and part of it not. The former was very little touched, while the latter was at leaſt a fifth or ſixth part ſmutted. Several inſtances of this kind ſhow the utility of that preparation; and though it may not at all times be an entire preventative, it ſhould not be omitted. The cultivation of barley has been a good deal circumſcribed, ſince it could not maintain a fair and equal competition in the market with that of our ſouthern neighbours. It is however of excellent quality, and begins to be looked after. Some ſales were lately made of the old crop, at 21s. per boll. The oats are ſaid to be a little defective in ſome inſtances; but, from what trials have been made in this quarter, they appear to give nearly meal for corn. The potato oat ſeems to anſwer very well with us, and, where ſown along with the other varieties, does not appear defective in ſtraw, and promiſes a ſuperior return, where the ſoil is of any depth and condition. For ſix or eight weeks paſt, a number of cattle have gone ſouthward, but rather at reduced prices; the remaining ſtock may be about the uſual quantity, but ſmall ſized. The turnips came forward pretty well at firſt; but, in general, they do not promiſe to be very large, having ſuffered, in many inſtances, from the caterpillar and worms. Potatoes are of excellent quality, and an abundant crop.——*October* 24.

Letter from a Gentleman in Upper Annandale, 26. October.

'Having got in nearly all the corn crops in this diſtrict, it ſeems to be agreed on, that the oats are a full average, and the barley a very inferior crop, both in quantity and quality. Peas were both early and abundant. Sown hay turned out exceeding light; but there has been a decent foggage, or aftermath, when the ſecond mowings of clover were finiſhed, although theſe mowings, like the hay crop, were far from being abundant. Potatoes turn out a conſiderable degree above an average, and are good in quality alſo. The little wheat ſown here was the beſt crop on the ſoil, and quite free of ſmut or blight. Turnips have turned out above expectation, as the earlieſt ſeeds burſt in conſequence of exceſſive moiſture, and the next ſowings were cut down by the caterpillar, which has left large blanks in the fields. Some farmers tranſplanted into thoſe blanks. The common turnip tranſplanted has not formed a decent root. The Swediſh plants are alſo diminitive, being too late removed; but common greens and rorecole have done well tranſplanted into the turnip vacancies; and a field that was four times rolled has not a blank in the whole, and every plant thriving. This rolling, repeatedly, has effectually anſwered—extirpating the caterpillar, without injuring a ſingle turnip. It was publiſhed in the newſpapers; but the reſult of the operation being now fully ſeen, it ſhould

be made known, in caſe of another invaſion againſt another ſeaſon, when the farmers may be ready to give the enemy a general and effectual defeat, on their firſt appearance.'

Letter from Glaſgow, Oct. 26.

'Our harveſt (a few fields about the moor edge excepted) is finiſhed, and all the grain ſecured in moſt excellent condition. Wheat and oats are fine crops, both in regard to quantity and quality. A few blacks, indeed, have appeared in ſome of the former which have come to market; but we are glad to find the quantity in this ſituation is by no means ſo great as was once imagined. Beans and barley are a fair crop, though of the latter very little was ſown laſt ſeaſon. The crop of potatoes is abundant, and the quality in general fine.

'The importation of grain, during the laſt three months, having been ſo far ſhort of what was expected, the ſtock in the merchant's hands is almoſt exhauſted, and prices in conſequence, particularly of wheat, have advanced conſiderably. Still, however, they muſt go higher, before they come to a level with other markets; and till then we muſt wait for the uſual ſupplies.

'State of Glaſgow Markets, Oct. 26.

'Dantzic Wheat,	40s. to 45s.	per boll Linlithgowſhire meaſure.
American ditto,	30s. — 40s.	ditto of 240 lib. Engliſh.
Iriſh ditto,	32s. — 34s.	
Old Scotch ditto,	38s. — 40s.	ditto Linlithgowſhire meaſure.
New ditto ditto,	30s. — 36s.	
Engliſh Barley,	35s. — 36s.	ditto Stirlingſhire meaſure.
Scotch ditto,	26s. — 29s.	
Ditto Beans and Peas,	21s. — 23s.	
Potato Oats,	24s. — 25s.	
Small ditto,	18s. — 22s.	

Retail price of Hay, 7d. to 8d. per ſtone.
Ditto Straw, 4d. — 5d.'

Fife Quarterly Report.

The harveſt became general about the 1ſt September; and ſo favourable did the weather continue for above ſix weeks, that cutting down and carrying in the victual to the ſtack-yards went on without the ſmalleſt interruption. Upon wet lands, the ſeed-time being unfavourable, barley was in many caſes very late; and a good many fields at this date are ſtill out, expoſed to the bad weather which we have had of late; yet none of the grain is injured, the winds which providentially followed the rains having dried it immediately. This late barley is well ripened, and will be fit for malt, though without doubt inferior to early ſown grain in quality.

Oats are univerſally good, both a bulky crop, and of fine quality, ſuperior to 1803 in the number of acres ſown. Many farmers, finding

no market for that year's barley crop, were this ſpring induced to ſow oats in place of barley.

Barley, for the above reaſon, though of equal quality to crop 1803, is greatly under it in quantity of acres ſown, and number of bolls produced.

Peas and beans are only a middling crop; thoſe early ſown good, the late ones not filled; the ſtraw abundant and well got in.

Wheat turns out better than expected; but generally more or leſs ſmutted; many fields infected to a great degree, perhaps one fourth of the whole crop. Where free from ſmut, and not laid down by rains in Auguſt, the quality is very good. It may however be conſidered, on the whole, not equal to crop 1803.

The wheat-ſeed ſeaſon has been extremely good; and the appearance of the new wheat ſuch as the farmer would wiſh to ſee.

Hay was a light crop, greatly inferior to 1803. The young clovers have a moſt favourable appearance.

Turnips are generally good, and a thick crop; neither being attacked by the fly nor caterpillar, as it is ſaid they were in England, and in ſome counties in Scotland.

Flax, of which a large quantity was ſown, is every where a fine crop, the produce per acre at leaſt double to crop 1803. The high price of this article induced many farmers to ſow flax after potatoes, in place of barley, which, for two years, could not be raiſed with profit, having no market for it. But the flax ſeed is this year of poor quality, and very little of it will be fit to ſow. The demand for Dutch ſeed, therefore, will be great next ſpring; whereas the Scots ſeed, crop 1803, was ſo fine as to equal the beſt Dutch ſeed; at leaſt the produce in flax, per acre, is equal, but the ſeed from the Dutch ſuperior.

Potatoes are of fine quality, and every where an abundant crop, indeed, far beyond an average one; an equal number of acres planted as laſt year, but the produce fully double to that of crop 1803, and in quality they as far excel.

Upon the whole, crop 1804, in this county at leaſt, is conſiderably above an average crop. The ſtack-yards, well filled with good wholeſome grain, preſent the conſolatory view of plenty for man and beaſt; and it may be hoped no complaining will be heard. As trade and manufactures have revived, no man or woman willing to be induſtrious is out of employment. Their earnings are ſuch as to enable them to live with comfort at the preſent rate of proviſions, which is not above the proportion of the rate of wages.

The farmer has a ready market for grain of all ſorts, and he has grain to ſupply the demand. Barley has ſtarted conſiderably, and brings from 20s. to 24s. per boll. Oats (of a quality to give meal for oats) ſell at 20s. per boll; Oatmeal at 20s. per boll; Wheat at 30s., if good. As no ſcarcity of any neceſſary of life is to be apprehended, it is to be preſumed the prices will be ſteady, without going much higher or lower. If ſo, all claſſes will wear their preſent happy appearance of contentment.

The price of cattle, though below laſt year's rate 20 *per cent.*, is perhaps ſtill high enough; and, if trade flouriſh, it is ſuppoſed they will maintain their preſent rates.——*Oct.* 26.

Dumfries-ſhire Quarterly Report.

THE weather, ſince the middle of July, appears to have been more variable on this weſt ſide than on the eaſt ſide of Scotland. Both hay and corn harveſts were interrupted by rain, though, after all, the crops may be ſaid to be well got.

Wheat does not appear equal to the promiſing appearance it had in July. In many places, there is a great deal of ſmut; and in others, particularly holm lands, mildew affected the ear before the grain was fully fed. Where this is the caſe, the grain, though clean and well coloured, is hollow, which makes the meaſure weigh light. The beſt wheat we have is on the uplands, upon the dry, though light ſoils.

Barley is a good crop, and well got; but the quantity ſown has been much below an average, owing to the expectation, that the ſales would be leſſened by the high duty on malt. Oats are generally good; and thoſe cut within the month of September, are in good order; but ſuch as were later, have been injured by the weather. The loſs ſo occaſioned has fallen upon farmers who run wholly upon the common or late oats. Thoſe who ſow both early and common oats have the harveſt divided; and many, this ſeaſon, had the half of their crop in the yard before the late ſeed ſowers begun to cut. Various advantages ariſe from ſowing a portion of early oats, beſides the ſecurity from froſts, which ſometimes overtake the late ones. The potato oats appear to keep their pre-eminence upon good land. Even when they lodge, they are more than proportionally better than common oats. The moſt general error of farmers, in the management of all early corns, is the letting them become over-ripe. Much of the beſt of the grain falls, and the ſtraw loſes its ſubſtance. It is not attended to, that a pickle of early oats, cut nearly green, will become firm and meal well, when common oats of the ſame hue are nothing but chaff. Here it may be proper to obſerve to farmers of leſs experience, that early oats become later as the ſame ſeeds continue to be ſown in this country. It has been found, that Poliſh oats, ſown for ten years, will loſe as many days in ripening, and alſo become ſmaller in the pickle. They will grow leſs liable to ſhake; but the original purpoſe failed—their early and ſuperior quality.

Potatoes are a good and full crop. They are now ſhipping at 18d. the cwt., which pays well to the farmer near the coaſt.

The prices of corn has riſen conſiderably. The Liverpool factors are now beginning to ſhip. Wheat, ſound, weighing 60 lib. the Winchester buſhel, is worth from 7s. to 8s. Barley at 50 lib. 4s.; but ordinary barley this year weighs 53 lib. Oat meal, in retail, is 2s. 2d. per ſtone. Whether this advance is from the ſtate of the crop, or the effect of the late act of Parliament, is not certainly known. It proba-

bly

bly proceeds from both. The effect, however, is rational and neceſſary for the times. Yet if the riſe upon barley proceeds from a leſſened crop, on the idea of a want of demand, owing to the high duty on malt, it is an evil which will affect the progreſs of improvement in agriculture, and alſo leſſen the animal food produced upon improved grounds. Paſtures laid down with barley, it is well known, will yield more growth than when ſown with any other corn.

Turnips have become a better crop than they appeared to be in July. From being generally later ſown, they are not ſo large, but are ſtill growing, and will do ſo for ſome weeks, if freſh weather continues. They will have the advantage of ſtanding more froſt than the early ſown crops. The fields injured by the caterpillar in July recovered in a great degree. Thoſe ate wholly except the fibres, ſhot out again, and have grown turnips, uſeful, though not ſo large as they would have been. Swediſh turnip ſeems to be increaſed in quantity. Still the farmers do not attend to ſow ſo early as the beginning of June, which is neceſſary.

The demand for cattle has been rather better the laſt two months; but it appears that many of thoſe carried to the ſouth have not met with a ready market; and in what ſtate the dealers to the *far ſouth*, as they are called, will return to their winter quarters, is ſtill doubtful. Draught ewes have gone off without difficulty, and without diminution of p.ices. And notwithſtanding the high price of wool, the Moorland ſheep keep fully up with the Cheviot or long breed.—*Oct.* 27.

Berwickſhire Quarterly Report.

Our harveſt, which commenced in the laſt week of Auguſt, was favoured with a tract of fine ſeaſonable weather; and, excepting beans, ſome of which were but recently carried, the crop was all ſecured by the 10th of October in excellent condition.

Wheat is a good average crop, though the quality is inferior to that of laſt year. Barley was this year cultivated on a very circumſcribed ſcale, in conſequence of the dull ſale it experienced theſe two years paſt; and the produce is but middling. The oat crop is deficient in bulk, and rather ſmall in the grain; but as a good deal of land, formerly allotted to barley, was occupied by this grain, and as the hill diſtrict was all harveſted in good order, the aggregate return in this county may be reckoned nearly equal to that of ordinary years. Peas are an abundant crop. Beans are alſo productive; but the wet ſeed-time occaſioned their being ſown to a much ſmaller extent than uſual.

Turnips have improven greatly ſince the beginning of harveſt, and may now be reckoned a full crop; but the demand has been ſo limited, that the letting price (per acre) is not yet properly aſcertained. Young clovers are luxuriant, and paſturage has all along been freſh and good; but the foggage or aftermath, from a general deficiency of clover, has not made a great appearance.

We have ſeldom experienced a more favourable ſummer for preparing

the fallows, or a finer ſeaſon for ſowing wheat; all the early fields have made a vigorous braird.

Lean ſtock ſold heavily in the beginning of this quarter, and markets declined in conſequence; but the demand has been upon the increaſe ſince this month commenced, and both ſheep and cattle have been taken off at better prices.——*Oct.* 27.

Letter from a Farmer near Kelſo, Oct. 22.

'From the beginning to the 20th of Auguſt the weather was extremely wet; but, ſince that time, circumſtances have been extremely favourable for field operations. Many farmers cut down their corn, and carried it into the ſtack-yard, without the leaſt interruption; and the whole crop is now completely ſecured in this neighbourhood. It ſeems to be of leſs bulk in the yard than expected when in the fields, which does not augur much in favour of the quality of the grain.

On the 21ſt September we had a high gale of wind, which muſt have ſhaken *good* grain; but as the loſs was trifling, the preſumption is, that little of what was then uncut came under that deſcription. In general, our wheats, both of winter and ſpring culture, are faulty, ſuch ſamples as have appeared at market being by no means fine; and it may be ſuppoſed that the worſt has not yet been preſented. My opinion is, that this grain is one third below an average. Barley is a fair crop with us, but little being ſown, the home conſumption will nearly require the whole produce. Oats appeared a fair crop, though, upon trial, they do not meal ſo well, by nearly a fifth part, as thoſe of laſt ſeaſon. Peas and beans are articles we deal little in; but what we have ſeem to be tolerable. Turnips, although much injured by the black worm, have recovered greatly, and, upon the whole, promiſe to be a full average crop; and the young graſſes are looking ſo well upon all ſorts of land, that it is impoſſible to diſtinguiſh with what grain they have been ſown, or under what management they have been cultivated.

The fallow grounds, from the long dry weather, are in fine condition, and wheat ſeed is getting faſt forward. Lean cattle are bought up pretty readily, at prices very little below thoſe of laſt year. At Wooler fair laſt week, a great quantity of ſheep were ſold. Dinmonts, in good condition for turnips, ſold at the rate of 7d. per lib. ſink. A conſiderable demand appeared for ſwine, and draft ewes brought nearly the ſame prices as laſt year. Few turnips are yet let; but the prices ſeem to ſtart at 6l. or 7l. per Engliſh acre.'

Tweeddale Quarterly Report.

The ſtate of the weather during the quarter has been ſuch as to equal even the moſt ſanguine expectations of the huſbandman. It was favourable to the filling, ripening, cutting down, and bringing in of the grain crops, to a degree ſeldom experienced in this diſtrict. It may be noticed, however, that the heavy rains which took place about the beginning of Auguſt, cauſed a lodging of the crops on ſome fields; but

as the wetneſs was of ſhort duration, it is hoped little damage has been ſuſtained. Harveſt commenced about the 1ſt of September, and at this date ſcarcely a ſheaf of corn is to be ſeen in the fields. This unuſual advantage was obtained, in a great meaſure, from the grain ripening equally faſt upon the high as upon the low grounds, and from a plentiful ſupply of reapers. Oats have ſuffered conſiderably from ſmut, particularly that variety called *potato oats*, which were ſubſtituted in place of barley in many fields that had carried turnips the preceding year. The diſeaſe ſeems to have prevailed moſt upon lands of a thin ſoil, and ſuch as were out of condition. Some of the potato oats have been thraſhed, and it is found that the affected grain diſcoloured that which was ſound; but it is hoped the operation of the ſhealing-mill will prevent the blackneſs from extending to the meal. Notwithſtanding this drawback, they may be conſidered as an abundant crop.

Few ſales of grain have yet been made; but barley ſeems to be particularly in demand. The quantity raiſed here this ſeaſon is, however, but ſmall, the low prices of laſt year having prevented the cultivation of this grain to the uſual extent. Hay ſold from the rick at 6d. to 8d. per ſtone. It was but a light crop, owing to want of plants. Potatoes are uncommonly plentiful, and of excellent quality. Young clovers have planted well, and appear very luxuriant. Some farmers allow their feeding ſheep to paſture them before they are put to turnips; and it is thought this practice is beneficial to the plants, eſpecially upon light ſoils, ſuch as prevail in this neighbourhood, as the earth is brought more cloſely about their roots by the treading of the ſheep.

Cattle in condition for turnip feeding meet with ready ſale; and old ewes bring from 9l. to 11l. per ſcore, being from 3s. to 4s. per head lower than laſt year's prices. Good horſes are in demand, and bring large prices.——*Oct.* 15.

Upper Ward of Lanark Report.

Excepting ſome heavy falls of rain in the firſt and ſecond weeks of Auguſt, the weather has continued through the quarter exceedingly favourable. Harveſt became general, in this diſtrict, about the ſecond week of September, and the crops were ſecured by the middle of October. In the Moorland diſtricts, however, a conſiderable part is ſtill in the fields.

Crops of all kinds are good, both as to quantity and quality, and may ſafely be eſtimated as amounting to a full average. Turnips are better than expected, conſidering what they ſuffered from the caterpillar in July. Hay, which was a good crop, ſold at 6d. per ſtone from the rick. Cattle markets have been looking up ſince the month of Auguſt, and ſales are readily made. Good horſes are ſcarce, and bring high prices.——*Oct.* 30.

Inverneſſhire Quarterly Report.

Harveſt is now over in this diſtrict, and ſeldom has finer weather for the purpoſes of cutting down and bringing in the corn been witneſſed.

Crops are fully equal to an average, both in point of quantity and quality. Potatoes, the principal ſupport of the poorer claſſes, are abundant, and are ſelling at 8s. per boll of 256 pints. Importation, if at all neceſſary, will be very limited this ſeaſon. Few ſales of grain have yet been made. Wheat and barley may be reported at 30s. per boll. Turnips are good, and provender of every ſort plentiful. Drovers are now buying all ſorts of cattle briſkly, and at good prices. Sheep are nearly one third below laſt year's prices. Beef and mutton from 4d. to 6d. per lib.——*Oct.* 24.

Eaſt-Lothian Quarterly Report.

From the 3d to the 20th of Auguſt, the weather was variable, generally wet; and ſome of the rains being remarkably heavy, the ſtrong corns were much lodged, conſequently impeded in their progreſs to maturity. The remainder of Auguſt, and the whole of September, furniſhed choice weather for ripening and harveſting the crop, thereby leſſening the damage apprehended to be done by the preceding rains. October has been a variable month, often unfavourable to carrying ſuch crops as remained in the field, but not detrimental to the wheat-ſeed preparation. The ſowing of this grain is therefore far advanced; and if decent weather is got for a fortnight longer, the extent of ground occupied with it will probably be greater than ever known in this diſtrict.

Whatever deficiency of produce may exiſt in other diſtricts of the iſland, it may ſafely be ſtated that none will be found here, except perhaps in the barley crop, occaſioned by a ſmaller quantity being ſown than in former years. Wheat, though it does not yield to the ſtack like that of laſt year, and is of inferior quality, yet, being generally cloſe in the ground, and of great bulk, the return per acre will on the whole not be leſs than the ordinary average. Barley is of good quality, though perhaps not more than one half of the acres cuſtomarily ſown were under this grain. Oats were a ſhort crop; but the quality being fine, and more ſown than uſual, by reaſon of barley being ſo unſaleable, it is not ſuppoſed that the produce will be below a full average. Peas and beans are generally good, and, being harveſted in fine condition, promiſe to be of excellent quality, and more productive than for ſeveral preceding years.

Markets for grain have gradually advanced for ſeveral months; but the chief riſe has been upon wheat, which is at leaſt one third higher than laſt year at this time. A circumſtance may be ſtated extremely creditable to the quality of the wheats raiſed in this diſtrict; and it is done upon the authority of an eminent corn-dealer, who is in the habit of ſending wheat to the London market. This gentleman, oftener than once in the courſe of the quarter has topped Marklane with wheats purchaſed at Haddington; and one day, in particular, his price was four ſhillings per quarter higher than any other cargo preſented.—

Nov. 2.

Account

Account of WHEAT *sold in* HADDINGTON MARKET, *for Ready Money, from December 2d 1803 to October 26th, both days inclusive.*

Dates.	*Weekly Quantity.*	*Weekly Produce.*	*Weekly Average.*	*Monthly Average.*
1803.	BOLLS.	£. s. d.	£. s. d.	£. s. d.
Dec. 2.	534	716 3 3	1 6 10	
9.	674	872 8 6	1 5 $10\frac{7}{15}$	
16.	569	722 15 3	1 5 $4\frac{10}{15}$	
23.	503	618 17 0	1 4 $7\frac{3}{15}$	
30.	497	603 2 6	1 4 $3\frac{2}{15}$	
	2777	3533 6 6		1 5 $5\frac{4}{15}$
1804.				
Jan. 6.	396	490 6 9	1 4 $9\frac{3}{15}$	
13.	540	670 4 6	1 4 $9\frac{10}{15}$	
20.	384	470 0 3	1 4 $5\frac{9}{15}$	
27.	618	739 19 0	1 3 $11\frac{4}{15}$	
	1938	2370 10 6		1 4 $5\frac{8}{15}$
Feb. 3.	459	546 19 0	1 3 $9\frac{11}{15}$	
10.	484	580 3 6	1 3 $11\frac{8}{15}$	
17.	499	594 10 0	1 3 $9\frac{11}{15}$	
24.	362	433 12 0	1 3 $11\frac{5}{15}$	
	1804	2155 4 6		1 3 $10\frac{9}{15}$
Mar. 2.	395	479 13 9	1 4 $3\frac{5}{15}$	
9.	320	391 15 0	1 4 $5\frac{10}{15}$	
16.	384	478 9 0	1 4 11	
23.	434	539 12 6	1 4 $10\frac{4}{15}$	
30.	413	538 2 6	1 6 $0\frac{8}{15}$	
	1946	2427 12 9		1 4 $11\frac{4}{15}$
April 6.	320	440 9 0	1 7 $6\frac{4}{15}$	
13.	296	424 2 0	1 8 $7\frac{10}{15}$	
20.	384	559 1 6	1 9 $1\frac{8}{15}$	
27.	494	725 7 0	1 9 $4\frac{4}{15}$	
	1494	2148 19 6		1 8 $8\frac{4}{15}$
May 4.	443	635 5 6	1 8 $7\frac{3}{15}$	
11.	608	855 14 6	1 8 $1\frac{9}{15}$	
18.	531	711 18 0	1 6 $10\frac{3}{15}$	
25.	516	691 14 3	1 6 $9\frac{8}{15}$	
	2098	2894 12 9		1 7 $7\frac{5}{15}$

Dates. 1804.	*Weekly Quantity.* BOLLS.	*Weekly Produce.* £. s. d.	*Weekly Average.* £. s. d.	*Monthly Average.* £. s. d.
June 1.	546	758 11 9	1 7 $9\frac{4}{12}$	
8.	368	526 13 6	1 8 $4\frac{3}{12}$	
15.	349	519 17 6	1 9 $9\frac{9}{12}$	
22.	491	772 1 6	1 11 $5\frac{3}{12}$	
29.	427	670 14 3	1 11 $4\frac{11}{12}$	
	2181	3247 18 6		1 9 $9\frac{4}{12}$
July 6.	531	821 5 0	1 10 $11\frac{3}{12}$	
13.	481	748 17 0	1 11 $1\frac{7}{12}$	
20.	376	574 11 2	1 10 $6\frac{9}{12}$	
27.	407	614 9 0	1 10 $2\frac{3}{12}$	
	1795	2759 2 2		1 10 $8\frac{10}{12}$
Aug. 3.	373	545 0 0	1 9 $2\frac{8}{12}$	
10.	362	554 17 0	1 10 $7\frac{10}{12}$	
17.	377	630 11 0	1 13 $5\frac{4}{12}$	
24.	409	704 12 6	1 14 $2\frac{6}{12}$	
31.	331	528 17 6	1 11 $11\frac{5}{12}$	
	1852	2963 18 0		1 12 $0\frac{1}{12}$
Sept. 7.	431	669 14 0	1 11 $0\frac{11}{12}$	
14.	574	840 14 6	1 9 $3\frac{6}{12}$	
21.	633	918 13 6	1 9 $0\frac{4}{12}$	
28.	662	1009 6 0	1 10 $5\frac{10}{12}$	
	2300	3438 8 0		1 9 $10\frac{9}{12}$
Oct. 5.	800	1227 9 3	1 10 $8\frac{2}{12}$	
12.	658	1043 18 0	1 10 $8\frac{4}{12}$	
19.	636	1055 3 0	1 13 $2\frac{9}{12}$	
26.	798	1421 9 0	1 15 $7\frac{6}{12}$	
	2892	4747 19 3		1 12 10

ABS.

ABSTRACT.

	Monthly Quantity.	*Monthly Produce.*			*Monthly Average.*			*Annual Average.*		
	BOLLS.	L.	s.	d.	L.	s.	d.	L.	s.	d.
December	2777	3533	6	6	1	5	$5\frac{4}{15}$			
January	1938	2370	10	6	1	4	$5\frac{6}{15}$			
February	1804	2155	4	6	1	3	$10\frac{8}{15}$			
March	1946	2427	12	9	1	4	$11\frac{4}{15}$			
April	1494	2148	19	6	1	8	$8\frac{4}{15}$			
May	2098	2894	12	0	1	7	$7\frac{3}{15}$			
June	2181	3247	18	6	1	9	$9\frac{4}{15}$			
July	1795	2759	2	2	1	10	$8\frac{10}{15}$			
Auguſt	1852	2963	18	0	1	12	$0\frac{1}{15}$			
September	2300	3438	8	0	1	9	$10\frac{2}{15}$			
October	2892	4747	19	3	1	12	10			
	23077	32687	11	8				1	8	$3\frac{11}{15}$

Atteſted by ARCHIBALD TODRICK,
Clerk of the Market.

Letter from a Gentleman near Perth, Oct. 24.

'Our harveſt in this quarter of Perthſhire was as quick as any one on remembrance. Many people finiſhed cutting in three, and few exceeded four weeks. Wheat may equal the quantity of laſt year, but the quality is much inferior. Barley is defective both in quantity and quality. Oats kept long back in ripening, and, though much lodged by the rains, appear on the whole to be ſuperior to laſt year's produce. Potatoes are a full crop. So are Turnips: But lint, of which a great breadth was ſown, turns out but poorly at the mill.

Live ſtock continue to bring good prices; and, from the great plenty of *keep*, it is probable, that no material change will happen in the remaining part of the ſeaſon. Harveſt wages were high. There is a rivalſhip in this county betwixt the manufacturer and farmer; therefore, high wages muſt be given, before the weaver can be induced to leave his loom, even during the harveſt months.'

Extract of a Letter from George Dempſter Eſq., dated Dunichen, Oct. 31.

'Such a ſeaſon as the preſent, God in his providence never beſtowed on Scotland—ſuch an autumn, I mean. For it ripened our wheat, brought in our hay, flax, corn, and potatoes, without the leaſt injury from rain or wind. This muſt not have univerſally been the caſe, otherwiſe victual could not bear its preſent price. We had a ſale, by auction, of 100 head of Highland cattle yeſterday, which brought on an average 30 *per cent.* above the prices of ſuch cattle in Sutherland. They were ſmall creatures, and chiefly purchaſed by gentlemens'

tlemens' grieves, for their maſter's tables. The grain market looks up here. I have ſold my wheat at 29s. per boll. Good barley is 22s. 23s. to 24s.'

ENGLAND.

Northumberland Quarterly Report.

THE weather, for the laſt quarter, has in general been favourable for the purpoſes of agriculture. Two froſty nights, in the latter end of July, came very opportunely for deſtroying the black caterpillars, which were making great ravages amongſt the young turnips; theſe froſts were ſucceeded by ſome rains in the beginning of Auguſt; after which, the weather was (with few exceptions) uniformly dry, and, of courſe, the harveſt has been remarkably fine, and the crops carried in the moſt deſireable ſtate.

It was obſerved in the laſt report, that the wheat crop had the appearance of being thin, which, on reaping, has proved even worſe than was then apprehended; and attended with the ſingular circumſtance, of being moſtly lodged, though the crop was ever ſo thin, and ruſted, or cankered in the ſtraw; a diſeaſe which prevents the grains from receiving their proper nouriſhment, and makes them ſkinny and ſmall; the conſequence is, that a good ſample of new wheat is rarely to be ſeen, and is everywhere very inferior to the produce of laſt year. In this diſtrict, the wheat crop may be ſafely ſtated to be conſiderably below an average; and, in the county of Durham, matters are ſtill worſe.

The crops of barley on dry lands were abundant; but on ſtrong loams, and moiſt ſoils, very thin; and, from the low price at which this grain was ſold laſt year, lands that would have been appropriated to barley, were ſown with other kinds of grain, which occaſions the quantity in this county to be much below the average produce of other years.

Oats are in general a fair average crop. Beans and peas were never known better, and are conſiderably above an average.

The turnip crop on dry lands is remarkably good: the plants that had their leaves eaten off with the black caterpillar, revived by the rains and ſucceeding warmth in Auguſt; and are now ſcarcely to be diſtinguiſhed from thoſe that eſcaped the ravages of this reptile.* Upon ſome

* In your laſt Yorkſhire report, it is ſtated, that '*probably ſome attention to Vagg's method of night-rolling might have been beneficial.*' On this I muſt beg leave to obſerve, that night-rolling was not an original invention of Mr Vagg: the merit (if it has any) is due to Mr Ellis, who practiſed and publiſhed it many years before Mr Vagg offered it at ſecond hand to the public, and enriched himſelf, by pretending to divulge *a ſecret* for deſtroying the *turnip fly*; but which turned out to be the *ſlug*, which every reader of Ellis had *long been acquainted with*.

ſome very dry lands, there is an appearance of mildew, which will check their growth and deteriorate the produce.

Potatoes are every where an abundant crop, and good in quality.

The wheat ſowing is nearly finiſhed on ſummer fallows, and alſo after drilled beans, the lands being moſtly in fine tilth, though in ſome places the ſtrong ſoils are rather too dry for the ſeed vegetating with ſafety.

Our markets for live ſtock have lately been on the decline. Beef from 6s. 6d. to 7s. 6d. Sheep from 6d. to 7d. per lib. ſinking offals. The corn markets are getting up, particularly for wheat and barley.——22. *October.*

Letter from an extenſive Farmer in Dorſetſhire, October 22.

'Our proſpect is gloomy. We had a fine harveſt, it is true; but, a fortnight before it began, we evidently ſaw ſtrong ſigns of blight, which daily increaſed and occaſioned many people to cut down the wheat before it was ripe; they being of opinion, that it was better to cut it then, and let it ripen in the ſtook. I cannot ſee a reaſon for this, unleſs it is ſuppoſed that the blight increaſes by the corns ſtanding uncut. During the harveſt, we had ſome fine ſeaſonable rains, and the grain *appeared* to get plumper; but now that the moiſture is evaporated, the grain is returned to the ſtate it was in before. I have lately been in Devonſhire, and in the neighbourhood of Somerſetſhire. Speaking in general, the wheat is certainly worſe, both in grain and quantity, than it has been for many years. I truſt, however, there are many exceptions. I have thraſhed enough to be certain, that I ſhall not average 12 buſhels Wincheſter meaſure, per Engliſh acre; and of that a good deal is ſhrivelled and pinched. Our barley crops are decent, by no means abundant; not more than two thirds of laſt year's crop, which was a good one.

'Oats are but a middling crop with us, but we ſeldom reckon upon this grain; for you know what Johnſon ſaid of them. Indeed, we never do them common juſtice, ſowing them generally on lands where ſcarce any other grain will grow. Peas were a very decent crop. Of beans, we ſow or plant but very few. Here is ſome quantity of old wheat left; but as the full wheat ſeed time is come, the flails are rebounding in every barn, (we have but few thraſhing machines yet), and a ſhilling per buſhel and more has been given for thraſhing, which in common ſeaſons is done for 3d. 3½d. and 4d. On account of the quality being ſo bad, moſt people are ſowing old wheat; conſequently, the demand for it is conſiderable, and thoſe who have any that is good, get 12s. per buſhel; others 10s. 6d., and 9s. 6d.

'Of barley there is but little thraſhed yet, for the above reaſon, as well as the fear of a ſcarcity of fodder during the winter. What comes to market is from 5s. to 5s. 6d. per buſhel. As to oats, few are yet thraſhed; price uncertain, but about 3s. and upwards. To change the ſcene—Hay was an abundant crop, and well ſecured; the aftermath exceeding good, and a fine ſeaſon for feeding it off. Fat beaſts have been rather plenty all the ſeaſon, and no want of ſtock coming on in hand. The old ewes at Weyhill-fair ſold wonderfully well.

well. You will recollect great numbers of them are very forward in lamb. Some lambs fell going up to the fair, and were carried on by the ſhepherds. From theſe ewes the London market is ſupplied with houſe-lamb; but numbers of the ewes will not yean till near Ladyday, the greater part from about Chriſtmas to Candlemas. The forwardeſt ſold for 60s. per head, and from thence down to 40s.; but the average of the better ſorts about 50s. Fat beef now ſells at about 11s. per ſcore of 20 lib. ſinking offal. Mutton 8d. per lib. of 16 ounces, ſinking do. This year's lambs, ſhorn about Midſummer, ſold at the laſt fairs (I mean male lambs gelt—females are ſeldom ſold, except by chance) from 14s. to 18s. and 20s. per head.

'We are pretty forward in our wheat ſeeding juſt round this place, tho' we are later than elſewhere. We have more than half done. The land works very well; for, generally, it is ſown on a clover lea of one, two, and ſometimes three years ſtanding, on one earth, (one ploughing) worked in with very heavy harrows after it is ploughed. The farmers were completely frightened laſt ſpring. Barley ſunk to 2s. 6d. per buſhel, and but little demand in appearance. They gave it to their pigs and horſes as nothing worth; but before harveſt it got up to 5s. and 5s. 6d. per buſhel, and none hardly to be had. What ſhort-ſighted mortals we are, and frightened at our own ſhadows, entirely forgetting what times we had only two years ſince!

'You ſay your rents are ſtill creeping up: we have caught the infection, and the malady is likely to increaſe, for the landlords have taſted the ſweets of it. You aſk, how is the property-tax liked; or rather, how is it paid on the old rents? As little increaſe as poſſible.

'We have but few long leaſes; ſeven, twelve, or fourteen years, are generally the longeſt. I believe the large farms are leaſt taxed: I need not ſay why. It is certainly more productive than the income-tax. The greateſt evaſion has happened in caſes where the landlord occupies his own lands.

Letter from a Farmer in Wales, Oct. 22.

'From the date of my laſt (July 15th) to the middle of Auguſt, we experienced a tract of cold unfavourable weather, with wind and rain, which unfortunately did much injury to many of the growing crops. Wheat till then had a fine appearance, and promiſed to yield a good return; but nothing is certain; for we have been completely diſappointed, particularly in low ſituations. The late ſown fields, and thoſe upon high grounds, generally eſcaped the blight. Few good ſamples are however to be ſeen; the beſt are from cold ſoils; and every one complains of the ſmall return, though the fine harveſt was certainly much in favour of its improvement. Barley never had a good appearance. The earlieſt ſown fields are worſt, which is an uncommon circumſtance. Oats, peas and beans, are all to be doing with; that is, they are equal to an average.

'We are now buſy ſowing wheat. Thoſe who ſowed early had a fine ſeaſon,

ſeaſon, and the grain brairded finely; but the laſt ten days, being wet, have forced thoſe who were behind, to leave the fallows till they get into better condition. Corn markets have advanced greatly ſince harveſt, and are likely to keep up. Cattle and ſheep have a dull ſale, but the prices are not to be complained of. All improvements here are at a ſtand, except the iron-works, which are daily increaſing. I am told that the Glamorganſhire iron now exceeds in quality that of the beſt foreign; of which there can be no better proof, than the demand from every part of the iſland where it has been tried. As a good part of this demand is from Scotland, it is my duty to ſtate, that all the iron made here is not of the ſame quality: that manufactured by the Dulais Company, and marked D. Co., may be depended upon, and is every thing with our ſmiths, who certainly may be reckoned competent judges.

Yorkſhire Quarterly Report; with a Retroſpective View of Rural Affairs, for 1804.

During the heavy rains of laſt Auguſt, the proſpect of the harveſt was rather gloomy: ſince that time, the ſeaſon has been one of the moſt favourable ever known. Whether by thoſe rains, or from whatever cauſe, the wheat crops are likely to be very unproductive, on account of the mildew, which has been almoſt general in this diſtrict; to that degree, that even one fourth of an average crop has not been obtained, in ſome inſtances, from the flail. However, there are ſtill ſome few good crops; and ſome of thoſe, in ſituations and aſpects, which render it extremely difficult to account for their eſcape from this pernicious ſcourge.

Barley and oats are deemed rather above than below the uſual produce. Beans are uncommonly good and productive, and moſt of them are ſtacked in the beſt condition. Potatoes are excellent, and plentiful. The beſt Wheat is about 11s.; Barley 5s.; Oats 4s.; Beans 6s. 6d.; Rye 5s. 6d. per buſhel of Wincheſter; Potatoes 3s.; Apples 8s. per buſhel upheaped. Rape and flax are thought to be deficient in ſeed; the prices advancing.

The ſummer fallowing, except by the more diligent cultivators, has not been ſo completely executed as might have been expected. Turnips were ſown upon very good tillages, but promiſed ill during the early ſtages of their growth: they now exhibit a very fine and plentiful aſpect, and ſome have been ſold about 5l. per ſtatute acre.

The late rains, though plentiful, were not ſuch as to hinder materially the ſowing of wheat, even on moiſt ſoils; yet that operation is in a backward ſtate; very little having been ſown as yet. Clovers and other ſeeds are very promiſing, and the after-graſs, or fog, abundant; ſo that there is a probability of the ſtocks of cattle being well ſupported during the enſuing winter. Clover ſeed, the produce of the preſent year, is ſuppoſed to be very deficient.

Lean cattle and ſheep are in demand, and are ſelling at good prices.

Hay

Hay is about 4l. to 5l. per ton. Fat cattle, ſheep, and hogs, are at moderate prices. Beef, 7d. to 8d. Mutton and Pork, 7d. Veal, 9d. Butter, 1s. 3d. per lib. Avoirdupois.

On a review of the whole year, it may be obſerved that the commencement of it was marked by moſt unfavourable circumſtances of weather; by which the check to vegetation of all kinds was ſo great, as abſolutely to threaten the want of every thing neceſſary to ſupport the live ſtock; conſequently forage appeared riſing to a price hitherto unheard of. But the farmer ſhould never deſpair; for ſo ſudden a burſt of growth as that which immediately ſucceeded, was ſcarcely ever before experienced; and in one week, about the end of April, the face of nature, as if by magic, was completely changed, and the ground was clothed with the moſt delightful verdure; much more delightful, as it ſo much exceeded our utmoſt hopes and expectations.

Since the above period, a moſt promiſing aſpect of plenty of every thing ſeemed uniformly conſpicuous, until the appearance of mildew about the middle of Auguſt; the cauſe of which pernicious blaſt to our beſt grain ought, in the opinion of the writer of theſe lines, to be much more ſedulouſly inveſtigated than it has been, that perchance, if not entirely dependent on phyſical cauſes not at all within our reach, ſome remedy or palliative may be diſcovered.

What may be more particularly inculcated in this review of the paſt ſeaſon, in order to future improvements, is, that the ſowing of all kinds of grain ought to be performed as early as poſſible; the proper ſtate of preparation by tillage and manuring being premiſed, theſe being the only artificial means of an early harveſt; and alſo that the reaping of grain, particularly of wheat, ought to be done in a much greener ſtate than is generally practiſed. Theſe circumſtances attended to, would be productive of the moſt beneficial effects, both to the quality of the grain, and the eaſe and ſafety of harveſting, while days are longer and weather drier than afterwards; effects which have been very convincingly offered to the diſcerning mind during the ſeaſon under review. It has certainly been within the obſervation of the writer, that wheat ſown as above, on late and backward ſoils, in the laſt week of September or firſt of October, has been reaped in a perfect ſtate the third week in Auguſt; while wheat ſown (*cæteris paribus*) in the ſecond week in November, was ill reaped in the third week of October inſtant, and the loſs by high winds almoſt incalculable. Beans alſo that were ſown in the firſt week of March have been houſed and thraſhed in the ſecond or third week of September, while thoſe ſown in April are now in the fields, and ſome of them uncut. Where the reaping of mildewed wheat has been too long delayed, the effect is very remarkable; that reaped in a green ſtate affording a tolerable ſample, while ſome of that reaped dead ripe is ſhrivelled up ſo as to be fit for nothing but hogs and poultry.

The preſent advance in wheat may be accounted for from the ſupply being inadequate to the demand; from the effect of mildew and blaſting,

blaſting, &c.: but, no doubt, many will attribute it in part to the operation of the corn bill of laſt ſeſſion of Parliament: if at all juſtly, that bill will ſoon be viewed in the light of an unpopular meaſure, and may be the means of future caution and check to the arrogance of affected political foreſight in matters utterly out of the reach even of the too much boaſted omnipotence of political regulation.

The abundant product of forage, with the excellent ſtate in which much of it has been ſaved, added to the ſeaſonable rains for the aftergraſs and turnips, muſt relieve the farmer from all anxiety in reſpect to the winter ſubſiſtence of his cattle and ſheep, eſpecially if it prove tolerably open weather till near Chriſtmas.

The dry weather of the harveſt has this year been of moſt ſingular uſe; for the ſtate of the wheats in particular was ſuch, that much wet weather in ſucceſſion would have entirely ruined the crops of that grain, and might have been productive of very unpleaſant, if not fatal conſequences. However, on the whole, we may venture to conclude, that the proſpect at the cloſe of the preſent year is more favourable to the agriculturiſt, though, unfortunately, leſs ſo to the public, than at the cloſe of the laſt.——*Oct.* 26.

Letter from Lynn (Norfolk) Oct. 29.

'In the abſence of your ordinary reporter, we beg leave to furniſh you with a few particulars concerning the crops and markets of this diſtrict.

'About one half of the wheat crop is materially injured by mildew, and in many places it is tainted with ſmut, which things neceſſarily cauſe qualities to be very variable. Some people houſed their wheats when in a tender ſtate; but the generality being in fine condition, and the number of acres under this grain greater in this than in the laſt ſeaſon, we truſt that this county will be able to export its uſual quantity.

'Barley is deficient at leaſt one fourth of laſt year's crop as to quantity, but the quality is good. Oats are conſidered to be ſhort of an average. Peas are unqueſtionably good; but beans are a ſhort crop, having ſuffered much from mildew.

'The farmers are now buſily employed in ſowing their wheat lands; and the work has been greatly facilitated by ſome fine rains ſent us lately. The delivery of grain has not hitherto been conſiderable; but the demand being great, a rapid advance of prices has taken place. Annexed you have a ſtate of prices here per quarter, put free on board.

'Beſt new wheat	80s.	Oats	23s.
Runs of old ditto,	76s.	Beans (old)	40s.
Ditto of new ditto 68s. to	76s.	White peas, 48s. to	52s.
Ditto courſe and black	60s.	Grey ditto	40s.
Rye	40s.	Winter tares	38s.
Barley	42s.		

'The crop of turnips is excellent this year.'

Letter from London, Oct. 30.

'From the general bad quality of the new wheat preſented at Mark-Lane, I am ſorry to ſay that the injury from blight appears to have

been more extenſive than was ſuppoſed when I wrote you laſt. The beſt ſamples are inferior to laſt year's; and the great bulk of what has been yet produced will not yield more than two thirds of the fine flour which the average of laſt year produced. In conſequence of this, the price of wheat has very conſiderably advanced, notwithſtanding the conſiderable ſupply of foreign wheat, which has been all quickly bought up. The quantity of new barley yet at market has been ſmall, and the crop ſuppoſed not to be ſo great as was expected, from which the price has alſo much advanced. The bean crop is eſteemed a good one; but as there has been no great ſupply, and a conſiderable demand for the Weſt Indies, prices have been on the advance for ſome weeks paſt. Hog peas are good in quality, and are now coming pretty freely to market. The new oats that have been ſold at Mark-Lane, have in general been of fine quality, and very dry and well harveſted. White peas are but of ordinary quality, and the crop not great, which has cauſed a conſiderable advance on boiling peas. We have had very favourable rains during this month, which has enabled the farmers to get their wheat ſown in the beſt order; and the weather being remarkably mild for the ſeaſon, the early ſown wheats are looking well.

State of London Markets, October 29th.

New Wheat - -	48s. 63s. 72s. to 78s. to 84s.
Old Wheat - -	52s. 76s.; fine 88s.; fine white 90s. to 92s.
Foreign Red - -	52s. 78s. 82s.
White Dantzic -	75s. 85s.; fine 90s.
Black Wheat -	60s, 70s.
Rye - - - - -	38s. 42s.
Barley - - - - -	44s. 48s.; fine, new and old, 50s.
Malt - - - - -	80s. 86s.
White Peas - -	42s. 45s.; Boilers, 56s. 60s.
Grey ditto - -	42s. 44s.; new, 45s.
New Small Beans	46s. 48s.; old 52s.
New Tick Ditto	42s. 45s.; old 48s.
Oats, Long Feed	21s. 24s.
—— Short Smalls or Friezlands,	24s. 27s.; fine old 29s.
—— Polands - - - - - -	25s. 27s. 29s.; fine old 31s.

All per quarter of 8 Wincheſter buſhels.

Fine Flour, delivered to the bakers,	70s. 72s. to 76s.; fineſt 78s. *p.* ſack.
Red Cloverſeed - -	40s. 60s. 84s.; fine, 90s. 105s.
White ditto - - -	80s. 90s.; fine, 112s.
Trefoil - - - -	30s. 40s.; fine, 48s. per cwt.
Old Hops in bags -	60s. 70s. 76s.; new, 75s. 84s. 90s.
Ditto in pockets to	80s.; new, 80s. 90s. to 98s. per cwt.
New Hay - - -	60s. to 80s. per load.
Old ditto - - -	80s. to 86s. per load.
Straw - - - -	32s. to 38s. per load.
Beef - - - - -	4s. 6d. to 5s.
Mutton - - - -	3s. 6d. to 4s. 8d.
Pork - - - - -	4s. to 4s. 4d.—All per ſtone of 8 lib.

Price

Price of Flour, Oct. 29.

Fine Engliſh Flour	75s. to 80s.	American Flour	48s. to 52s.
Second ditto -	70s. — 75s.	Per ſack of 5 buſhels, or 280 lib.	

Weight and Price of Bread.

Peck Loaf weighs	17 lib. 6 oz. 6 dr. -	ſold for 4s. 3d.
Half Peck Loaf -	8 lib. 11 oz. 0 dr. -	2s. 1½d.
Quartern Loaf -	4 lib. 5 oz. 8 dr. -	1s. 0½d.

Manſion-Houſe, Tueſday, Oct. 23.—Official Return of Flour, including from the 13th of Oct. to the 19th of Oct.

Total, 21,870 ſacks.—Average price 73s. 1¼d.—3s. 7¼d. higher than laſt week.

Return of Wheat in Mark-lane, including only from the 8th of Oct. to the 13th of Oct. agreeable to the new Act.

Total, 18,494 quarters.—Average 72s. 11d. 3—11d. higher than laſt return.

Price of Grain at Uxbridge.

Thurſday, Oct. 25.—Wheat per load, 18l. to 25l.—Barley per quarter, 2l. 2s. to 2l. 6s.—Beans per quarter, 2l. 4s. to 2l. 6s.—Oats per quarter, 1l. 9s. to 1l. 15s.—Peas per quarter, 2l. 8s. to 2l. 12s.

Average Price of Corn per Quarter.

Great Britain, for the Week ending Oct. 20.

Eng. & Wales.	s.	d.	Scotland.	s.	d.	Eng. & Wales.	s.	d.	Scotland.	s.	d.
Wheat -	68	8		55	10	Beans -	36	5		34	7
Rye -	38	10		36	10	Peas -	35	8		33	11
Barley -	36	0		29	8	Oatmeal -	19	8		19	9
Oats -	25	3		23	4	Big -	25	8		21	2

State of Country Markets, &c. in England.

Wakefield, Oct. 26.—Our ſupply of grain for this day's market was not large, and ſuperfine wheats were readily ſold at from 7s. to 8s. per quarter advance. The inferior kinds were alſo ſaleable at an advance of from 3s. to 4s. per quarter. Oats remain with little alteration. Barley little at market; and as well as Malt ready ſale, at a ſmall advance. Beans are alſo in great demand, and good ones 4s. per quarter dearer.

Per Quarter Wincheſter.—Wheat South country, 46s. 60s. to 66s. fine 88s. Ditto Lincolnſhire, 46s. to 88s. Ditto Holderneſs, 46s. to 88s. Ditto New, none. Barley, Norfolk and Suffolk, New, 42s. to 44s. Ditto ditto Old, 30s. to 34s. 6d. Ditto Lincolnſhire, Old 40s. to 42s. Ditto Seconds, none. Ditto Yorkſhire Wolds, 42s. to 44s. Oats, 23s. to 28s. Beans, South country, 40s. to 45s. Ditto Lincolnſhire, 40s. to 45s. Ditto Holderneſs, 40s. to 45s. Ditto

ditto New, none. Tares for Seed, 56s. to 60s. Peas, White, none. Malt, South country, 60s. to 74s. Ditto, Lincolnſhire, 66s. to 74s. Ditto, Yorkſhire Wolds, 66s. to 74s. Flour, fine, per Bag of 280 lib. 54s. to 56s. Rapeſeed per Laſt, 44l. to 46l.

Leeds.—Wheat, 27s. to 35s. per load. Rye, 20s. Beans, 18s. to 19s. Oats per quarter (8 buſhels), 26s. to 33s. Barley, 32s. to 42s. Shelling, 36s. to 42s.

Carliſle, Oct. 26.—*Grain*—New Wheat, 21s. Old ditto, 24s. Rye, 14s. Barley, 12s. Potato Oats, 9s. 6d. Common ditto, 8s. 1d. per Carliſle buſhel. Fine Flour, 2s. 2d. Oat-Meal, 2s. 2d. Barley Meal, 1s. 6d. Rye Meal, 1s. 6d. per ſtone.—*Butcher Meat*—Beef, 6d. Mutton, 6d. Veal, 5d. Lamb, 5d. per lib. Hams, 9s. Bacon, 8s. per ſtone. Freſh butter, 12d. to 13d. per lib. Firkin Butter, 12d. Ditto per firkin, 35s. to 45s. Potatoes, 2d. to 3d. per hoop.

Nottingham, Oct. 20.—Wheat, 71s. Rye, 38s. Oats, 24s. 6d. Barley, 36s. Beans, 43s.

Derby, Oct. 20.—Wheat, 71s. Rye, 38s. 6d. Oats, 25s. Barley, 36s. 6d. Beans, 43s.

Lincoln, Oct. 20.—Wheat, 88s. Rye, 38s. Oats, 24s. Barley, 36s. 6d. Beans, 43s.

Warwick, Oct. 20.—Wheat, 72s. Rye, none. Oats, 27s. Barley, 37s. Beans, 43s.

Leiceſter, Oct. 20.—Wheat, 69s. Rye, 38s. Oats, 25s. Barley, 35s. Beans, 42s. 6d.

York, Oct. 20.—Wheat, 68s. Rye, 36s. Oats, 23s. 6d. Barley, 35s. Beans, 42s.

Glouceſter.—Old Wheat, 10s. 6d. to 11s.; New ditto, 10s.; ditto for ſeed, 10s. 6d. to 11s. Barley, 6s. Old Beans, 7s. to 7s. 6d.; New ditto, 7s. Oats, 4s. to 4s. 6d. White Peas, 9s.; Grey ditto, 7s. per cuſtomary buſhel of 9½ gallons.

Tewkeſbury.—Wheat, 9s. to 10s. Barley, 5s. 4d. Peas, 7s. 3d. Oats, 4s. 4d. per buſhel. Flour, 66s. per ſack. Beans for ſeed, none; other beans, 16s. to 18s. 6d. per bag.

Worceſter.—Wheat, 9s. 6d. to 10s. Barley, 5s. 4d. to 5s. 7d. Beans, 6s. to 7s. Peas, 5s. 10d. to 6s. Oats, 3s. 8d. to 4s. 6d. per buſhel of 9½ gallons. 1651 pockets of Hops were weighed on Saturday, of which the current prices were from 3l. 14s. to 4l. 4s. per cwt. At Stourport, on Thurſday, 540 pockets of Hops were weighed; prices from 3l. 15s. to 4l. 4s. per cwt.

Hereford.—Wheat, 8s. 6d. Barley, 5s. 5d. Oats, 4s. 8d. Beans, 6s. 3d. Peas, 6s. 3d. (10 gallons.)

Roſs.—Old wheat, 11s. to 11s. 6d.; New ditto, 10s. 6d. to 11s. Barley, 6s. 6d. to 6s. 9d. Old oats, none; New ditto, 3s. 6d. to 4s. Grey Peas, 6s. 6d. to 7s.; White ditto, 8s. 6d. to 9s. Beans, 6s. 9d. to 7s. per buſhel of 10 gallons.

Devizes.—Wheat, 63s. to 80s. Barley, 36s. to 38s. Oats, 26s. to 30s. Beans, 44s. to 50s. per quarter.

Reading.—

Reading.—Wheat, 50s. to 92s. Beans, 37s. to 43s. Peas, 47s. to 48s. Oats, 24s. to 33s. Barley, 34s to 37s. per quarter.

Warminſter.—Wheat, 66s. to 82s. Barley, 43s. to 45s. Oats, 30s. to 34s. Beans, 58s. to 62s. per quarter.

Cheſter.—Wheat, 8s. Barley, none. Oats, 3s. 3d. average, per Wincheſter buſhel.

Chicheſter.—Wheat, 2 l. to 2 l. 10s. Barley, 42s. Oats, 28s. to 30s. Peas, 36s. to 38s. Flour, 70s. to 72s. per ſack.

Havant.—Our market ſtill continues on the advance. Beſt Wheats are conſiderably higher than laſt week, and the inferior ſorts find a ready ſale at better prices. Barley ſells at 43s. Oats, Beans, and Peas, have obtained a trifling riſe.

At the Swinſtead Fair on Monday, notwithſtanding there was a large ſhow of ſheep, they ſold dearer by 5s. a head than at Corby Fair.

Provincials.—Exceſſive rains, day and night, have within a fortnight fallen in Cumberland, thereby rendering the roads almoſt impaſſable; and, at length, the different bridges in the ſuburbs of Carliſle were inacceſſible, being ſurrounded with water. On Tueſday morning, the united rivers of Caldew and Eden, overflowing their boundaries on all ſides, preſented to the eye one undiſtinguiſhed ſheet of water. Some acres of potatoes and of newly ſown wheat, ſeveral ſheep and young cattle, were ſwept away.

On the Wolds of Yorkſhire, plantations continue to be formed daily, on a conviction that the land is not leſs improved by them, than the beauty and appearance of the country.

The Potato.—This excellent and wholeſome root is very rarely cooked in the manner it merits, and whereby it may be made into food at leaſt as nutritious as any ſpecies of our diet. The following is the true Lancaſhire receipt:—'Sort out your potatoes as to ſize, ſcrape off the rind, put them into an iron pot, (if caſt iron the better), ſimmer them until they begin to crack, and a fork will pierce them eaſily; after this, pour off all the water, put away the lid of the iron pot, ſprinkle over them ſome ſalt, and ſhake up well; after this, place the pot at the edge of the fire, and there let it remain for an hour, or more: in this time, all the moiſture of the potato will gradually exhale in ſteam, and you will find them (be the ſort or growth what it may) white and fleaky as ſnow, and in ſuch a ſtate of eating, as thoſe only can judge who have tried them. Take them out with a ſpoon or ladle.'

Liverpool Meteorology—From January to June 1804.

January.

Barometer high, fair and ſun.—3d, Froſt.—5th, Snow.—7th, Hail and ſnow: Cold weather.—10th, Miſty rain.—18th, Windy, ſun, ſtill rain.—24th, Cloudy, and rain to the end.—28th, Very windy, and the glaſs roſe high: For the moſt part a mild month. Hygrometer moiſt. A deal of intermitting ſun upwards of 22 days: thoſe of hail, rain and ſnow, 20 days.

Greateſt approxim. of wind to the ſouth.

	In.	Dec.		In.	Dec.
Depth of rain,	3	2	Evaporation of water,	0	75

February.

Sun, little rain, and ſnow in the nights.—4th & 5th, Windy.—6th, A ſharp froſt: P. M. aurora borealis.—8th, Foggy.—11th, Eclipſe of the ſun, attended with much rain, (previous to the conjunction, in London it was ſtormy), afterwards fair and froſt.—13th, Every thing remarkably forward.—22d, Cold winds.—24th, Very windy, followed by rain.—29th, Fair, ardent ſun: No clouds in Zenith. In general, a dry, warm month: Intermitting ſun, ſometimes ardent, for 22 days.—Rain, hail and ſnow, more or leſs, 13 days.

Greateſt approxim. of wind to the North.

	In. Dec.		In. Dec.
Depth of rain	0 99	Evaporation of water	1 1

March.

Fair and froſt. Wind changeable. Veered round to the S. E.; and on the 3d much ſnow: Sleet.—6th, Fair, and cold winds.—10th, Fair and ſun: Windy.—13th, Rain, cold winds, and foggy.—23d, Fair and ſun, windy.—28th, Sun, and little rain to the end. The air for the moſt part dry, though a cold and windy month. Intermitting ſun more or leſs 17 days; thoſe of rain, hail or ſnow, 20 days.

The greateſt approxim. of wind to the ſouth,

	In. Dec.		In. Dec.
Depth of rain	2 5	Evaporation of water	1 5

April,

Windy 3d.—Froſty, with ſleet and ſnow, to 6th.—8th, Cloudy, with rain and wind.—18th, Fair and ſun; little hail.—23d, Changeable.—26th, Fair and ardent ſun.——For the moſt part a dry month, except about the 16th, rather cold, with hail and ſnow.

Intermitting ſun upwards of 21 days. Hail, rain and ſnow, 15 days.

Greateſt approxim. of wind to ſouth.

	In. Dec.		In. Dec.
Fall of rain,	1 75	Evaporation of water,	1 75

May.

Fair ardent ſun 4th, at night a heavy thunder ſtorm here and within the verge of Liverpool many miles. It came with the direction of the wind S. by E. as it was tremendous at Bath in the afternoon.—7th, Fair ardent ſun; little rain.—21ſt, Electric ſhowers; much rain.—24th, Three P. M. wind S. W. by S. a thunder ſtorm broke with heavy rain. At nine P. M. wind at N. W. with the comparative velocity of 33 or 28 ounces on a ſquare foot. Great thunder ſtorms in the neighbourhood before, which might be expected from the denſe clouds that have paſſed ſince the 18th inſtant.—25th, Cold and windy, and changeable to the end.

Intermitting ſun 19 days—Hail, rain, and ſnow, 10 days.

Greateſt approxim. of wind to the South.

The winds, or rather ſqualls, on the 16th, 24th, to the 29th, have been detrimental to agricultural concerns.

	In. Dec.		In. Dec.
Fall of rain,	3 0	Evaporation of water,	2 8

June.

June.

Sun and rain.—7th, Very windy.—11th, Fair, ardent ſun.—14th, Rain.—18th, Ardent ſun.—24th, Thunder ſtorm here, but more particularly at Runcorn in Cheſhire.—25th, Fair and ardent ſun to the end. For the moſt part a dry and warm month. The days of ardent ſun nearly 22: thoſe of rain 11.

Greateſt approxim. of wind to N.

	In.	Dec.		In.	Dec.
Fall of rain	1	22	Evaporation of water	3	5
Jan. & June inclus. as meaſured by G. J.	12	66		11	40

POSTSCRIPT TO SCOTISH INTELLIGENCE.

Mid-Lothian Quarterly Report.

With the exception of about three weeks of almoſt daily rain previous to the 17th of Auguſt, which threatened deſtruction to the growing corn, the laſt quarter has been diſtinguiſhed by moſt favourable weather for the various field operations. The ſucceeding dry and hot weather haſtened the harveſt, and rapidly brought the grain to complete maturity, even in the higheſt ſituations of the county, where in general it has been ſecured in the moſt healthy ſtate.

It is true, that ſome fields of wheat are much affected with ſmut, and others, where too rank, will produce grain of rather an inferior quality; but, upon the whole, the various crops may be rated at fully an average, and oats conſiderably above it. Potatoes alſo are abundant, and excellent in quality. The averages of the caterpillars upon the turnip crop were as ſuddenly terminated as their attack was unexpected; and far leſs injury has been ſuſtained than was dreaded or committed laſt year by their pigmy forerunners. The crop, in conſequence, may be deemed good.

Wheat ſowing is nearly brought to a cloſe, and hitherto has been finiſhed in excellent *trim*; in ſhort, few ſeaſons have afforded the farmers ſuch ample proſpects. It is to be dreaded, however, that theſe tranſient circumſtances may elate ſome ſo far as to forget the *paſt*, and to judge of the *future* by the *preſent* in the renting of land, which may prove injurious to themſelves as well as the community; ſeveral inſtances of which have already occurred to warrant the remark.

From the want of a market for barley for the two laſt ſeaſons, perhaps there is not more than one half of the uſual quantity raiſed within the county. So ſhort-ſighted are mankind, even foreſtallers, that ſome of thoſe in want of the article, have made purchaſes of the preſent crop at 32s. the Linlithgow boll.

Black cattle continue to ſell at a price that yields a fair profit both to the breeder and feeder; but the market is glutted with inferior ſheep, which ſell at prices that give profit to nobody, it is ſaid, except the butchers.——*November* 5.

NOTICES TO CORRESPONDENTS.

A COPY of '*Obſervations on the Formation and Management of Uſeful and Ornamental Planting, on the Theory and Practice of Landſcape Gardening, and on the New Mode of Embanking from the Sea*, by J. LOUDON *Landſcape Gardener, Planner, &c. No. 4. Chiſwell-Street, Bedford-Row, London, and No. 7. Leith Terrace, Edinburgh*,' has been received. This ingenious and amuſing performance ſhall be reviewed as early as poſſible.

We are ſorry that ſeveral reviews of agricultural publications have lain ſo long with us. If an apology is neceſſary, the beſt will be gathered from the fact, viz. that ſuch a quantity of what may be called temporary materials has conſtantly been ſent us, as rendered it out of our power to overtake thoſe of a more permanent deſcription. In our next we ſhall try to pay off ſome of our outſtanding arrears, particularly thoſe due to the reviewers of Cumberland and Weſtmoreland ſurveys.

We are honoured with LORD SOMERVILLE'S communication on the working of Oxen, which ſhall be ſubmitted to the conſideration of our readers. In the mean time, we are free to ſay, that the particulars now ſtated by his Lordſhip are more ſatisfactory than any thing hitherto ſent us on that important ſubject.

Mr HEADRICK'S valuable eſſay *on the Analyſis of Limeſtone* is an acceptable communication. This gentleman will always be a welcome gueſt at our board, ſeeing that in him ſcience is conjoined with obſervation and experience. For this, and former favours, he will pleaſe accept of our ſincere thanks.

The '*Leading Queries on Agriculture*, &c.' ſent us ſome time ago, will appear without fail. We delayed this paper on purpoſe, till the next volume, truſting it will create ſome diſcuſſion among our correſpondents. Another paper from the ſame ſource is under conſideration.

Mr HAY'S '*Thoughts on the Agricultural State of the Country, and on the New Corn Bill*, ſhall alſo appear in our next Number. We are deſirous of entertaining much reſpect for the ſentiments of this gentleman on practical matters, though apprehenſive that ſeveral of his obſervations at this time will not be generally acceptable. However, he ſhall have a fair hearing.

Mr T. B.'s eſſay *on the Eaſt Lothian Mode of Cropping* is very ſatisfactory to us. We muſt doubt, however, whether paſture graſs will ever make a conſiderable figure in that diſtrict, at leaſt ſo long as its increaſe is oppoſed by local circumſtances. Abſtractedly ſpeaking, we are not diſpoſed to place much faith in the intrinſic merits of any rotation, being ſatisfied that every thing depends upon the way and manner in which the

the ſeveral operations are executed. The other favour of this correſpondent, *on the Encloſing of Land*, ſhall not be neglected.

The gentleman who ſent us part of an eſſay '*on the Neceſſity and Advantage of Farmers underſtanding the proper Cultivation of a Kitchen Garden*,' is reſpectfully requeſted to tranſmit the remainder, to which every attention will be paid. When it is received, we will be enabled to correſpond with him on the ſubject mentioned in his private letter.

An anſwer to the query, '*On the Method of Making Capons*,' has come to hand. We ſhall do ourſelves the pleaſure of writing the gentleman who obligingly favoured us with the anſwer, concerning the other matters which he mentions.

The *Fifeſhire Ploughman* proves to be a clever fellow. With a little dreſſing, he will make a reſpectable figure.

A great variety of other papers are come to hand, to which particular attention will alſo be paid.

No. XXI. will be Publiſhed on Monday, 10th February 1805.

ERRATA IN THIS NUMBER.

Page 403, 3d line from top, *dele* one of the aſteriſks after the letter *J*.
P. 433, firſt line at top, for *dear*, read deer.

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